

APPLICATIONS FOR ADMISSION AND FOR TRANSFER

The Constitution provides that the Board of Direction shall elect or reject all applicants for *Admission* or for *Transfer*, and, in order to determine justly the eligibility of each candidate, the Board must depend largely upon the Membership for information.

This list is issued to members in every grade for the purpose of securing all such available information, and every member is urged to scan carefully each monthly list of candidates and to furnish the Board with data in regard to any applicant which may aid in determining his eligibility. It is the *Duty* of all *Members* to the *Profession* to assist the Board in this manner.

It is especially urged, in communications concerning applicants, that errors in the record be pointed out and a *Definite Recommendation as to the Proper Grading in Each Case* be given, inasmuch as the grading must be based upon the opinions of those who know the applicant personally, as well as upon the nature and extent of his professional experience. If facts exist derogatory to the personal character or to the professional reputation of an applicant, they should be promptly communicated to the Board. *Communications Relating to Applicants are considered by the Board as Strictly Confidential.*

The Board of Direction will not consider the applications herein contained from residents of North America until the expiration of thirty (30) days, and from Non-Residents of North America until the expiration of ninety (90) days from September 1, 1925.

MINIMUM REQUIREMENTS FOR ADMISSION

Grade	General Requirement	Age	Length of Active Practice	Responsible charge of work
Member	Qualified to design as well as to direct work	30 years	10 years*	5 years
Associate Member	Qualified to direct work	25 years	6 years*	1 year
Junior	Qualified for sub-professional work	18 years†	2 years*	
Affiliate	Qualified by scientific acquirements or practical experience to co-operate with engineers			
Fellow	Contributor to the permanent funds of the Society			

* Graduation from a school of engineering of recognized reputation is equivalent to 2 years' active practice.

† Membership ceases at age of 32 unless transferred to higher grade.

LIST OF APPLICANTS.

Names and Addresses of Applicants for Admission and for Transfer on this Preliminary List.
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The fact that applicants give the names of certain members as references does not necessarily mean that such members endorse.

The numbers at the left of each name indicate the serial number of the applicant for the current year, and the district in which he resides.

The abbreviations in *Italics* represent, respectively, *TT*, Total Time; *SP*, Sub-Professional Work; *P*, Professional Work; *RC*, Responsible Charge; *D*, Design. The figures showing the amount of time spent in Responsible Charge and on Design are the estimate of the Applicant. The allowance of two years for graduation and of one-third of a year for each academic year successfully completed in an engineering college without graduation are included in Total Time and Sub-Professional Work.

FOR ADMISSION

738 (3) ALBER, HARRY CONRAD FRANCIS, 308 Lincoln Bldg., Rochester, N. Y. (Age 30. Born Green Island, N. Y.) 1917 C. E., Rens. Pol. Inst. 1915 to 1918 (part of time, total 2 years) Village Engr. and Surveyor, Green Island, N. Y., surveys, designs, estimates and supervision of construction, sewers, pavements. *TT* 4: *SP* 2: *P* 2: *RC* 1.5: *D* 0.5. June 1917 to Jan. 1918 Asst. San. Engr., State Dept. of Architecture, Albany, N. Y., design and supervision of construction, sewage disposal, sewers and plumbing in buildings of state prisons and schools. *TT* 0.5: *P* 0.5: *RC* 0.5. Jan. 1918 to June 1919 Civ. Engr., U. S. Arsenal, Watervliet, design and supervision of building (\$500 000), sewers (\$30 000), bridges and water-works (\$10 000). *TT* 1.5: *P* 1.5: *RC* 1.4: *D* 0.9. June 1919 to July 1920 Asst. Engr. with C. H. Rogers, Cons. Engr., Daytona, Fla., in charge of street and sewer construction at Daytona Beach, Fla.; supervised paving (\$130 000) and sewer work (\$80 000). *TT* 1.1: *P* 1.1: *RC* 0.9: *D* 0.2. July 1920 to Sept. 1921 Asst. Engr., Connecticut State Dept. of Health, making investigations, water-works, sewage disposal and approval of plans. *TT* 1.1: *SP* 0.3: *P* 0.8: *RC* 0.8. Sept. 1921 to April 1923 Asst. Engr., New York State Highway Dept.; Engr. in charge of construction; supervised approx. \$600 000 worth of State highways. *TT* 1.6: *P* 1.6: *RC* 1.3: *D* 0.2. April 1923 to date Prin. Asst. Engr. with Wm. S. Lozier, Cons. Engr., Rochester, N. Y., in charge of all work in field and office (total at present \$3 000 000), sewers, pavement, water-works, complete surveys, estimates, specifications, plans and constructions; July 1925 became Chf. Engr. of construction. *TT* 2: *P* 2: *RC* 2. *TT* 11.7: *SP* 2.2: *P* 9.5: *RC* 8.5: *D* 1. Refers to L. M. Burrows, E. R. Cary, W. S. Lozier, W. W. Rousseau, G. S. Thompson, P. Waller.

739 (13) ALBERS, ROBERT WILLIAM, 525 Market St., San Francisco, Cal. (Age 27. Born Santa Rosa, Cal.) 1917 received Apprenticeship in Architecture from Cal. School of Mechanical Arts, and Willmerding School of Industrial Arts, San Francisco, Cal. June-Aug. 1917 Apprentice Draftsman with Hermann Barth, Archt. *TT* 0.3: *SP* 0.3. Oct. 1917 to Jan. 1919 Clerk, Southern Pacific Co., San Francisco, Cal. Feb. 1919 to May 1921 and Aug. to Oct. 1921 Draftsman, Associated Oil Co., San Francisco, warehouse and building design, distributing station arrangements, sign designs and art work, tank computations and architectural tracing. *TT* 2.5: *SP* 1.4: *P* 1.1: *D* 1.1. May to Aug. 1921 Foreman with D. E. Albers, Bridge Contr., Santa Rosa, Cal., supervision of steelwork and concrete finishing, and ordering materials for \$16 000 reinforced concrete highway bridge. *TT* 0.3: *P* 0.3. Feb. 1922 to July 1925 Draftsman, Pacific Gas & Elec. Co., San Francisco, electrical designs and layouts of transmission and distribution substations, and field work on steam generating station. *TT* 3.4: *SP* 2.4: *P* 1: *D* 1. July 1925 to date member of firm, Wichman & Albers, San Francisco, electrical and general drafting and designing. *TT* 0.1: *P* 0.1. *TT* 6.6: *SP* 4.1: *P* 2.5: *D* 2.1. Refers to F. B. Cook, Jr., J. R. Guptill, J. B. Leonard, W. H. Popert, E. L. Soule, R. D. Wichman.

740 (11) ANGAS, WILLIAM MACK, 4214 Jackdaw St., San Diego, Cal. (Age 33. Born Great Burden, England.) 1917 B. S., Mass. Inst. Tech. June 1917 Asst., Dept. of Civ. Eng., Massachusetts Inst. of Technology, instructing in surveying field work. *TT* 2: *SP* 2. June 1917 to Jan. 1918 Instructor in Navigation, U. S. Shipping Board, teaching navigation and

naautical astronomy in free schools of Shipping Board for training officers; latter part of July in charge of Boston School, and then in charge of Baltimore School. *TT 0.5: P 0.5: RC 0.4.* Jan. 1918 to July 1925 Lieut. (Jun. grade) and Lieut., Corps of Civ. Engrs., U. S. Navy, engaged as follows: Jan. 1918 to July 1920 Lieut. (Jun. grade) (temporary rank of Lieut. from July, 1918); at Naval Acad. for 4-week course in naval methods of procedure; then Asst. at Navy Yard, Philadelphia, on various work, including construction of small reinforced concrete structures, frame structures, paving, and numerous small electrical installations; in charge of operation of water system, and waste-water survey, and of design of 1,200-gal. motor fire-engine foam-type pumper; 6 months field representative of officer in charge of construction of new power plant; July 1920 to Jan. 1922 in charge yard and dock contract work at same Yard, including completion of power plant, construction of pattern shop (reinforced concrete) and two radio compass stations in 4th Naval Dist., also of repairs to Dry Dock No. 3; from July 1921 to Jan. 1922 Asst. Public Works Officer; Jan. 1922 to July 1924 at Pearl Harbor Navy Yard as Asst. Public Works Officer, and (2 months in 1922) Acting Public Works Officer, had general charge of drafting and technical force on designs and estimates for reinforced concrete piers and buildings, addition to power plant, new water-supply system, and minor design involved by contract changes; also member of Board for development of Yard plans; July 1924 to April 1925 Asst. and Acting Plant Engr., at same Yard, in charge of construction of plant additions by yard labor including addition to power plant and to water-supply system, harbor moorings, and completion of new machine shop, also of design incidental to these projects; since April 1925 Asst. Public Works Officer, 11th Naval Dist., at San Diego, Cal., being Senior Asst. to the Public Works Officer and acting in his absence; has charge of all design in drafting room. *TT 7.5: SP 1.5: P 6: RC 5.5: D 3.9. TT 8: SP 1.5: P 6.5: RC 5.9: D 3.9.* Refers to E. H. Brownell, G. M. Bull, C. A. Carlson, L. E. Gregory, F. R. Harris, E. B. Keating, O. A. Mechlin, A. L. Parsons, W. L. Taylor, C. D. Thurber, D. C. Webb.

741 (1) ARMSTRONG, WALTER HAMILTON, 57 Pearl St., Paterson, N. J. (Age 30. Born Bayonne, N. J.) 1921 B. S. in Civ. Eng., Agri. and Mech. Coll. of Tex. April 1913 to Sept. 1915 Rodman to Chf. of Party for Wm. L. Whitmore, Civ. Engr. and Surveyor, Paterson, N. J., plane surveying, city subdivision, highway and sewer construction. *TT 4.5: SP 4: P 0.5: RC 0.5.* June to Sept. 1916 Rodman, Santa Fe System. June to July 1917 Chf. of Party, Public Service Comm., New York City, office and field work on lines and elevations for trackwork in subway construction. July to Sept. 1917 Chf. of Party, Erie R. R. Co., office and field work in M. of W. Dept. Nov. 1917 to Aug. 1919 with Signal Corps, U. S. Army. June to Sept. 1920 Asst. County Engr. Wise County, Tex., office and field work on highway and bridge construction, inspection and estimates. June 1921 to May 1924 Engr., Smallman-Brice Constr. Co., Birmingham, Ala., estimating on building contracts; layout and Asst. Supt.'s work on construction. *TT 2.9: P 2.9: RC 2.5.* June to Aug. 1924 Chf. of Party with Lozier, Zabriskie & Van Keuren, Engrs., Hackensack, N. J., inspection and construction of sewers. *TT 0.2: P 0.2: RC 0.2.* Aug. 1924 to date Asst. to Chf. Engr., Murrie & Co., Inc., New York City, compiling and checking field notes and office work on electrical power station appraisal. *TT 0.9: P 0.9: RC 0.9. TT 3.5: SP 4: P 4.5: RC 4.1.* Refers to A. P. Ackerman, H. J. Carroll, G. B. Cornell, J. H. Gaynor, R. L. Morrison, J. C. Nagle, W. C. Rohdenburg, R. A. Smallman.

742 (2) ARRIGONI, CHELSON LINO, 624 Main St., Middletown, Conn. (Age 25. Born Durham, Conn.) 1921 S. B., Mass. Inst. Tech. June to Oct. 1918 Surveyor, Norwich, Div., State Highway Dept. of Connecticut. July 1921 to Feb. 1922 Asst. to Engr. in charge of hydro-electric surveys in the Valsassina and at Castiglione del Peopli, Italy. *TT 2.5.* March to Dec. 1922 Supt., F. Arrigoni & Bro., on 8 miles of waterbound macadam road, including rock excavation in Guilford and Durham, Conn. *TT 0.7: RC 0.7.* April to Dec. 1923 and Feb. to Dec. 1924 Supt., Frank Arrigoni & Son, on waterbound macadam in Clinton, Killingworth, and Groton, Conn. (total 11 miles), and 4 miles of reinforced concrete in Town of Westbrook. *TT 1.5: RC 1.5.* July 1925 to date Gen. Mgr. and Vice-Pres., Frank Arrigoni & Son, Inc., at present constructing reinforced concrete in Glastonbury and Cromwell, Conn. (total 5 miles). *TT 0.1: RC 0.1. TT 4.8: RC 2.3.* Refers to C. J. Bennett, H. L. Blakeslee, A. W. Bushell, H. D. Immick, W. L. Ulrich, D. J. H. Webb.

743 (6) BAILEY, WILLIAMS DUNLAVY, 909 Second St., Beaver, Pa. (Age 24. Born Seattle, Wash.) 1924 C. E., Cornell Univ. June 1924 to date Senior Inspector, Dept. of Highways, Commonwealth of Pennsylvania, on state highway construction. *TT 3.1: SP 2.3: P 0.8.* Refers to F. A. Barnes, E. T. McIlvain, H. N. Ogden, C. Potts, F. J. Seery, L. C. Urquhart, C. L. Walker.

744 (10) BARTON, EDWARD ROY, Box 104, New Albany, Miss. (Age 26. Born Haslemere, England.) 1920 Ph. B., Sheffield Sci. School. Sept. 1920 to June 1921 and Sept. 1921 to June 1922 student in Civ. Eng., Yale Graduate School. *TT 3.5: SP 2: P 1.5.* June 1922 to date Jun. Highway Engr., U. S. Bureau of Public Roads, Observer and Draftsman at Bates Test Road (2½ months); in Washington office (1 year) and remainder of time collecting data in highway grading studies. *TT 3.1: SP 2: P 1.1: RC 1.1.* *TT 6.6: SP 4: P 2.6: RC 1.1.* Refers to T. W. Allen, C. T. Bishop, C. A. Hogentogler, P. G. Laurson, C. J. Tilden, J. C. Tracy.

745 (13) BEDNARSKI, EDWARD JOSEPH, 350 Bush St., San Francisco, Calif. (Age 48. Born Yaroslavl, Russia.) 1901 Engr. of Ways and Communications, Inst. of Engrs. of Ways and Communications, St. Petersburg, Russia. July 1901 to Sept. 1911 in Government Service, until May 1902 as Res. Engr. on dredging work in entrance channel at Schlisselburg, Lake Ladoga, St. Petersburg Waterway Dist.; May 1902 to Feb. 1905 Res. Engr. on construction of 17-mile subdivision of Vologda-Vyatka Ry.; April 1905 to Sept. 1911 Supt. of regulation and deepening of rivers Tura, Tobol and Irtysh, Siberia, Tomsk Waterways Dist.; Asst. Chf. Res. Engr., Irtysh subdivision of Tomsk Waterways Dist.; Vice-Pres., River Steamboats Examination Comm. *TT 9.6: P 9.6: RC 6.3.* Sept. 1911 to May 1913 ill. May 1913 to June 1918 Engr. responsible for design and construction of sea and river dredges, steam shovels and excavators, Pootloff Works, Petrograd, Russia; 8 months (during war) Representative of Pootloff Works, Petrograd, in supply C-tn, London, England. *TT 5: P 5: RC 0.6.* June 1918 to Dec. 1920 on voyage, Petrograd to Vladivostok and (4 months) contracting, restoring destroyed bridges on West-Oural Ry. *TT 0.3: P 0.3.* Feb. 1921 to Nov. 1922 Engr. in provisional service for new construction work on Government Rys., Java, Dutch East India. *TT 1.7: P 1.7.* April 1923 to Aug. 1925 Draftsman, Great Western Power Co. of California. *TT 2.3: P 2.3: D 2.3.* *TT 18.9: P 18.9: RC 6.9: D 2.3.* Refers to W. H. Alderson, S. de Karelscha, J. D. Galloway, J. M. Howells, C. M. Mardel, V. E. Timonoff.

746 (6) BEECHLEY, EDGAR HOMER, Lock No. 4, Washington Co., Pa. (Age 44. Born Crookston, Minn.) 1904 B. S., and 1906 C. E., Cornell Coll. June 1901 to Sept. 1902 Instrumentman, Choctaw, Oklahoma & Gulf Ry., preparing estimates and overseeing construction of Hallyville (Okla.) yards, roundhouse, shops, etc., and an 8-mile residency. *TT 3.2: SP 3.2.* Oct. 1904 to July 1907 Instrumentman, Chicago & Northwestern R. R., maintenance of way, Topographer on a preliminary survey, on construction of 22-mile residency, etc. *TT 2.8: SP 2.8.* Aug. 1907 to March 1909 post-graduate student, mostly mining and geological subjects, Univ. of California. *TT 1.3: P 1.3.* March 1909 to Aug. 1914 and May 1915 to June 1918 Overseer, U. S. Engrs., War Dept., 2d Dist., Portland, Ore., 3 months on triangulation fire control station at mouth of Columbia River, 2½ years in responsible charge of erection of number of fire-control and power stations and remodeling emplacements for fire control systems at Ft. Canby and Ft. Columbia, Wash., and Ft. Stevens, Ore.; 9 months designing plant for reconstruction of Oregon City locks; 1½ years inspecting bridge construction and miscellaneous work; after May 1915 in responsible charge of improvement and reconstruction of Oregon City locks and construction of 1200-ft. wall separating ship canal from mill race (with minimum interference with navigation and mill race). *TT 8.7: SP 1.9: P 6.7: RC 6: D 0.7.* Sept. 1914 to April 1915 Engr., The Whitney Co., Detroit, Mich., making hydrographic survey of upper end of Tillamook Bay, located short railroad and projected plans for extensive dredging and docks. *TT 0.7: P 0.7: RC 0.3: D 0.3.* July 1918 to March 1919 Engr., Bates & Rodgers Constr. Co., Chicago, Ill., on construction of four-way shipyard at Millville, Fla., and two model barges; about one-half of time Mould-Loftsman. *TT 0.7: SP 0.7.* April 1919 to date Asst. Engr., U. S. Engrs., War Dept., Pittsburgh, Pa., in charge of operating, maintenance and construction on Monongahela River, slackwater stream, fifteen locks and dams, moorings, repair plant and equipment; two locks and dams at present under construction (past year maintenance and operation over \$800 000 and construction over \$1 235 000). *TT 6.3: SP 0.2: P 6.1: RC 5.4: D 0.7.* *TT 23.3: SP 9: P 14.8: RC 11.7: D 1.7.* Refers to L. H. Beach, C. M. Cram, E. L. Daley, C. W. Kutz, A. B. McGrew, H. Taylor, E. B. Thomson.

747 (4) BERRY, CHARLES RADFORD, 407 Ann St., West Reading, Pa. (Age 27. Born Philadelphia, Pa.) 1919 B. S. in C. E., Univ. of Pa. Feb. to Sept. 1915 Draftsman, compiling city maps showing residential distribution system; field and office work, and June to Sept. 1918 inspecting construction of concrete foundation for transmission line towers, Philadelphia Elec. Co. June to Sept. 1917 Transitman with Irwin & Leighton; Chf. of Party locating structures on western half of cantonment at Camp Dix. June to Sept. 1918 Transitman, American International Shipbuilding Corporation, topographical survey,

and lines and levels for construction of reinforced concrete warehouse. *TT 2.6: SP 2.6.* July to Sept. 1919 inspection of brick road construction, Pennsylvania State Highway Dept. *TT 0.2: P 0.2.* Sept. 1919 to date Asst. Engr., Wm. H. Dechant & Sons, design of dams, roads, bridges, buildings, reinforced concrete structures, water distribution systems and pumping stations; valuations and appraisals of public utilities and determination of rate schedules. *TT 5.9: P 5.9: RC 2: D 4. TT 8.7: SP 2.6: P 6.1: RC 2: D 4.* Refers to H. C. Berry, F. H. Dechant, E. T. Grandlienard, C. J. Hartenstine, N. B. Jacobs, S. H. Widdicombe.

748 (13) BEYER, ADAM CARL, 811 Fifth Ave., San Rafael, Cal. (Age 24. Born St. Paul, Minn.) 1925 B. S., Coll. of Civ. Eng., Univ. of Cal. June to Aug. 1922 Rodman, California Highway Comm. May to Aug. 1923 Rodman, and June to Aug. 1924 Rodman-Force Acct. Timekeeper, Southern Pacific Co. June 1925 to date Asst. City Engr., San Rafael, Cal. *TT 2: SP 2.* Refers to R. E. Davis, C. Derleth, Jr., F. S. Foote, C. G. Hyde, P. A. Swafford.

749 (4) BIEG, HENRY CONRAD, 1530 N. Franklin St., Philadelphia, Pa. (Age 24. Born Philadelphia, Pa.) 1923 Engr. of Mines, Lehigh Univ. Aug. 1923 to April 1925 Field Engr. with Irwin & Leighton, Philadelphia, Pa., lines and levels, quantities, unit costs, construction details, etc., on building construction. *TT 3.7: SP 3.7.* April 1925 to date with Philadelphia Elec. Co., Underground Dept., design, and supervision of construction of structural details incident to underground conduit system. *TT 0.2: SP 0.2. TT 3.9: SP 3.9.* Refers to C. P. Bower, R. J. Fogg, T. M. Lavelle, C. F. Puff, Jr., S. M. Purdy.

750 (9) BROSSARD, LOUIS FISHER, 420 Bridge St., Gary, Ind. (Age 22, Born Oxford, Idaho.) 1925 B. S. C. E., Univ. of Idaho. June 1925 to date Draftsman, detailing, American Bridge Co. *TT 2.1: SP 2.1.* Refers to A. D. Butler, I. C. Crawford, C. E. Davis, F. W. Dencer, M. R. Lewis, A. P. Ludberg.

751 (1) BROWN, FREDERICK THEODORE, 10361 One Hundred Third St., Ozone Park, N. Y. (Age 24. Born Brooklyn, N. Y.) Student in Civ. Eng. (in 4th year of course), Cooper Union Inst. Tech. (evenings). Feb. to Aug. 1923 Tracer and Draftsman, Long Island R. R., Jamaica, N. Y. *TT 0.5: SP 0.5.* Aug. to Oct. 1923 Instrumentman, Rapid Transit Comm., New York City, transit and level work. *TT 0.3: SP 0.3.* Oct. 1923 to Aug. 1924 Draftsman and a little design, New York Central R. R., New York City. *TT 0.9: SP 0.7: P 0.2: D 0.2.* Aug. 1924 to date Estimator and appraisal work, Murrie & Co., New York City. *TT 1: P 1: RC 0.5. TT 2.7: SP 1.5: P 1.2: RC 0.5: D 0.2.* Refers to F. Auryansen, R. E. Dougherty, W. K. Peasley, N. Podoloff, W. C. Rohdenburg.

752 (5) BRYANT, CHARLES BYRN, 421 Union Trust Bldg., Washington, D. C. (Age 24. Born Washington, D. C.) 1922 B. S. in Chem., Johns Hopkins Univ., School of Eng. June 1922 to date Service Engr., Portland Cement Association, promotion, inspection and research work in connection with concrete paving and building construction. *TT 3.1: P 3.1.* Refers to J. H. Cosby, W. P. Darwin, A. B. McDaniel, G. A. Ricker, G. E. Warren.

753 (1) BUCK, HENRY WOLCOTT, Box 280, Yale Club, New York City. (Age 22. Born Wethersfield, Conn.) 1925 B. S., Sheffield Sci. School. July 1925 to date Structural Tracer, Dwight P. Robinson Co., New York City. *TT 2: SP 2.* Refers to H. G. Balcom, C. G. Bennett, C. T. Bishop, H. R. Buck, F. L. Ford, P. G. Laurson, I. W. McConnell, E. M. T. Ryder, P. Sheldon, C. J. Tilden, J. C. Tracy, P. R. Williamson.

754 (5) BURKE, EDWARD JOHN, P. O. Box 478, Norfolk, Va. (Age 23. Born Clinton, Mass.) 1924 B. S. in C. E., Worcester Pol. Inst. Aug. 1924 to date Deck Officer, U. S. Coast and Geodetic Survey. *TT 2.9: SP 2.9.* Refers to C. M. Allen, F. S. Borden, A. W. French, H. C. Ives, A. J. Knight.

755 (12) BURR, GEORGE DANFORTH, 536 County-City Bldg., Seattle, Wash. (Age 26. Born Minneapolis, Minn.) 1925 B. S. in C. E., Univ. of Wash. April 1917 to Nov. 1918 Private and Radio Sergeant, U. S. Army; Nov. 1918 commissioned 2d Lieut., Coast Artillery and placed on reserve. *TT 3.6: SP 3.6.* June 1919 to June 1920 and Sept. 1920 to Feb. 1921 Computer of earthwork, City Engr.'s office, Seattle, Wash. *TT 1.4: SP 1.4.* June to Sept. 1920 and Feb. 1921 to Jan. 1922 Draftsman on plans, profiles and estimates for highways and drainage, King County Engr.'s Office, Seattle. Jan. 1922 to date Asst. Engr. in same office, assisting in supervision (under Office Engr.) of preparation of plans for highways and cost data, design of minor highway structures, writing of specifications, investigation of and design of pavements. *TT 4.6: SP 1.1: P 3.5: RC 2.5: D 1. TT 9.6: SP 6.1: P 3.5: RC 2.5: D 1.* Refers to T. R. Beeman, I. L. Collier, E. C. Dohm, D. H. Evans, G. W. Harris, R. A. Huestis, T. G. McCrory, J. C. Rathbun.

756 (1) CLOWARD, DAVIS JONES, United Fruit Co., Limon, Costa Rica. (Age 30. Born Washington, D. C.) 1916 B. S. in C. E., and 1925 C. E., Univ. of Pa. June to Oct. 1909 Freight House Clerk, June to Oct. 1911 Signal Repairman, June 1912 to Jan. 1913, and June to Oct. of years 1913, 1914 and 1916 Chainman, and June to Oct. 1915 Car Repairman, Pennsylvania R. R. TT 2.9: SP 2.9. Oct. 1916 to May 1917 Instructor in Civ. Eng., Univ. of Pennsylvania. TT 0.7: RC 0.7. May 1917 to Aug. 1919 with U. S. Army, 10 months in A. E. F., until Aug. 1917 as Student Officer, Engr. Training Camp, American University, Washington, D. C.; then 2d Lieut., Eng. Res., with 307th Engrs., Camp Gordon, Ga.; and after Dec. 1917 2d and 1st Lieut., 8th Field Artillery; from Aug. 1918 to Aug. 1919 acted as Regimental Reconnaissance and Intelligence Officer in charge of all field surveying and mapping work, 4 months also Co. Commander of Headquarters Co. TT 1.5: SP 0.2: P 1.3: RC 1.3. Oct. 1919 to Dec. 1924 Engr., Asst. to Supt., Northern Ry. Co. of Costa Rica; about 6 months acted as Supt. and 1½ years as Roadmaster during absence of regular office holders on leave; 2 years Engr.-in-Chg on location and construction of 12½ miles of railroad in mountainous country. TT 5.2: P 5.2: RC 3.7: D 2. Jan. 1925 to date Chf. Engr., N. Ry. Co. and United Fruit Co. of Costa Rica. TT 0.5: P 0.5: RC 0.5: D 0.5. TT 10.9: SP 3.1: P 7.8: RC 6.2: D 2.5. Refers to W. Easby, Jr., E. L. Ingram. (Applies in accordance with Sec. 1, Art. I, of the By-Laws.)

757 (15) CURL, VERNON BELL, Box 524, Nowata, Okla. (Age 40. Born Long Island, Kans.) 1901 to 1905 Student, Kansas State Univ. Sept. 1905 to March 1907 Rodman and Instrumentman, Atchison, Topeka & Santa Fe Ry. TT 2.3: SP 2.8. 1907 to 1908 Draftsman, designing, etc., (6 months) and Instrumentman in charge of party, construction, maintenance, bridges, etc. (1½ years), Gulf, Colorado & Santa Fe Ry. TT 2: SP 0.5: P 1.5: RC 1.5. 1909 to 1910 Inspector, sewers and pavement, City of Guthrie, Okla. TT 1: SP 1. 1910 to 1917 Cashier in four banks in Oklahoma. 1918 to 1923 County Surveyor, County Engr. and City Engr., Perry, Noble County, Okla. TT 5: P 5: RC 0.5: D 4.5. 1923 to 1924 Secy. and Treas., Innis Sign Service, Sapulpa, Okla. 1924 to 1925 Constr. Engr. and Supt. with Cordes & McGill, Contrs., sewers, bridges, etc. TT 0.5: P 0.5: RC 0.5. 1925 to date Transitman, Oklahoma State Highway Dept. TT 0.3: SP 0.3. TT 11.7: SP 4.7: P 7: RC 2.5: D 4.5. Refers to E. S. Alderman, E. B. Black, W. C. Burnham, T. P. Clonts, E. H. Dunmire, C. E. Griggs, D. H. Jones, D. W. Patton, T. P. Paxton, R. R. Tway.

758 (1) DEDOULOFF, ALEXANDER ALEXANDER, Care, Russian Student Fund, Y. M. C. A. Bldg., Madison Ave., New York City. (Age 32. Born Lougansk, Russia.) 1922 B. S. Mass. Inst. Tech. April to Oct. 1913 Asst. Engr. on location, Semirechenskaya R. May to Aug. 1914 Asst. Engr. on location and construction, Nordonetz R. R., Russia. TT 3: SP 2: P 1: RC 1. Aug. 1914 to 1917 in active service at the Front: 1917 to 1918 Inspector of munitions, Russian Artillery Comm., New York. 1918 to 1920 with Russian Embassy, Washington, D. C., secretarial work. June 1922 to Aug. 1924 with Chicago Great Western R. R. Co., until March 1923 as Rodman, practically Instrumentman, then Bridge and Bldg. Draftsman and Constr. Inspector, Chicago Great Western R. R. Co. TT 2.2: SP 1.2: RC 0.3: D 0.7. Aug. 1924 to Aug. 1925 Designer, St. Paul Union Depot Co. TT 1: P 1: D 1. TT 6.2 SP 3.2: P 3: RC 1.3: D 1.7. Refers to C. B. Breed, F. Mears, G. A. Sampson, C. M. Spofford, G. H. Wilsey.

759 (1) DOEBLER, HORATIO WARD, 37 Madison Ave., Jersey City, N. J. (Age 26. Born Ft. Wayne, Ind.) 1922 C. E., Valparaiso (Ind.) Univ. Oct. 1917 to July 1918 Draftsman, Blaylock & Knapp, Steel Contrs., Chicago, Ill., detailing structural steel for grain elevator buildings. TT 2.7: SP 2.7. July 1918 to Jan. 1919 Export Inspector, American Car & Foundry Co., Huntington, W. Va., in charge of inspection of construction of steel railroad cars for French Comm. and U. S. R. R. A.; inspection of foundry, machine and erection shops. TT 0.5: SP 0.2: P 0.3: RC 0.3. Jan. 1919 to Jan. 1920 Student, Civ. Eng. course, Massachusetts Inst. of Technology. Jan. to Nov. 1920 Draftsman, Turner Constr. Co., Boston, Mass., detailing reinforced concrete for industrial buildings for Diamond Match Co., Springfield, Mass. TT 0.8: SP 0.8. Nov. 1920 to March 1921 Draftsman, American Car & Foundry Co., Huntington, W. Va., detailing structural steel for car construction; general civil engineering. TT 0.4: SP 0.4. March 1921 to Dec. 1922 Student, School of Eng., Valparaiso Univ. Jan. to April 1923 Instrumentman with S. V. Haworth, Engr., Huntington. TT 0.2: SP 0.2. April to Sept. 1923 Rodman and Inspector, Baltimore & Ohio R. R., West Virginia Dist., reconstruction of bridges and shops; lines and grades; general inspection of building construction. TT 0.4: SP 0.4. Sept. 1923 to date Draftsman, Turner Constr. Co., New York

City, detailing reinforced concrete, general building construction. *TT 1.9: SP 1.9. TT 6.9: SP 6.6: P 0.3: RC 0.3.* Refers to R. W. Boyd, C. C. Brown, C. F. Mebus, E. J. Moore, H. C. Paddock, F. R. Theroux.

760 (1) DURRANT, THEODORE VINCENT SCOTT, Engadine, Park Hill, Croydon, England, (Age 22. Born London, England.) 1924 B. A., Cambridge Univ., England, and Jan. to June 1925 Graduate Student, Massachusetts Inst. of Technology. *TT 2.4: SP 2.4.* Refers to J. B. Babcock, 3d, H. L. Bowman, C. B. Breed, C. M. Spofford, C. H. Sutherland.

761 (13) EREMIN, ANATOL ALEXANDER, 2026 Derby St., Berkeley, Cal. (Age 31. Born Samara, Russia.) 1917 Inst. of Ways of Communication, Petrograd, Russia (degree equivalent to B. S.). 1924 M. S. in Civ. Eng., Univ. of Cal. May to Oct. 1916 Res. Engr. for Oldenborger & Co., Contrs., construction of double-track railroad, 24-mile junction between Petrograd Warshawa and Riga-Orlovsk R. R., including construction of two wooden bridges. May to Oct. 1917 Transltman, South Siberian R. R. *TT 2.3: SP 2.3.* Feb. to June 1918 Inspector for Samara City Bldg. Dept., construction, alteration and repair of buildings. *TT 0.3: P 0.3.* Dec. 1918 to March 1919 Constr. Engr., Vladivostok County Charity Dept., construction, alteration and repair of buildings. *TT 0.3: P 0.3: RC 0.3.* April to Sept. 1919 Asst. Engr., American Trading Co., Youroveta, Vladivostok, Russia, general design and estimate of mechanical equipment of mines, factories and flour mills. *TT 0.4: P 0.4: RC 0.4.* May 1920 to Feb. 1922 Inspector and Des. Draftsman for Alkinson & Dallas, Civ. Engrs. and Archts., Shanghai, China, supervised construction of five reinforced concrete buildings (1 to 5 stories). *TT 1.8: SP 1.8.* Aug. 1923 to Jan. 1924 Draftsman for W. L. Huber, Cons. Engr., San Francisco, Cal., detailing reinforced concrete and steel structures. *TT 0.4: SP 0.4.* May 1924 to Jan. 1925 Draftsman and Estimator for Alameda County, Cal., on project of Estuary Tube. *TT 0.6: SP 0.6.* Jan. to April 1925 Designing Engr., American Smelting and Refining Co., Selby, Cal., design and assisting in supervision of reinforced concrete sinter bag house (56½ by 30½ by 81 ft.). *TT 0.2: P 0.2: D 0.2.* April 1925 to date Designing Engr. for Alameda County, Cal., design of Brightside Bridge (steel truss), Harel St. Bridge (3-span reinforced concrete continuous girder), A St. Bridge (2 spans, reinforced concrete) and Diamond Canon Arch Bridge. *TT 0.2: P 0.2: D 0.2.* *TT 7: SP 5.5: P 1.5: RC 1.1: D 0.4.* Refers to M. C. Collins, R. E. Davis, C. Derleth, Jr., B. A. Etcheverry, S. T. Harding, W. L. Huber, B. Jameyson, G. A. Posey.

762 (3) FRETTS, WALLACE VAN RENSSELAER, 729 Linwood Ave., Buffalo, N. Y. (Age 25. Born Chicago, Ill.) 1923 B. S. in C. E., Union Coll., Schenectady, N. Y. June to Sept. of years 1920-1922 Rodman, Chainman, Instrumentman, Chf. of Party and Draftsman, Kemper McLoughlin Co., Inc. *TT 2: SP 2.* Sept. 1923 to April 1924 Instrumentman, Chf. of Party and Designing Draftsman with Geo. C. Diehl, Inc., C. E., surveying, field and office work in design of highways, sewers, sewage-disposal plants and some reinforced concrete bridge design. *TT 0.6: SP 0.4: P 0.2.* April 1924 to May 1925 with Pennsylvania Dept. of Highways, until Oct. 1924 as Senior Draftsman on final design and checking of all preliminary to construction work and plans and as Asst. Chf. Draftsman in immediate charge of all preliminary and final work, also some maintenance work; after Oct. 1924 Chf. Draftsman in complete charge of drafting force on highway construction and maintenance; handled part of Dist. Engr.'s office work (correspondence, etc.), responsible for all design. *TT 1.2: P 1.2: RC 0.8: D 1.2.* May 1925 to date Asst. Res. Engr., Williamsville Office, Geo. C. Diehl, Inc., in charge of office work in connection with design and supervision of work in construction of highways, storm and sanitary sewers, water supply, design of bridges, subdivision development, general land surveying, flood control, sewage- and garbage-disposal plants (approx. cost of work in hand \$4500 000). *TT 0.2: P 0.2: RC 0.2: D 0.2.* *TT 4: SP 2.4: P 1.6: RC 1: D 1.4.* Refers to G. C. Diehl, S. W. Jackson, F. P. McKibben, W. F. Sheehan, C. H. F. Snyder, W. G. Taylor.

763 (8) GERMUNDSSON, THORBJORN, 1720 Wesley Ave., Evanston, Ill. (Age 28. Born Copenhagen, Denmark.) 1920 B. S. in C. E., Polyteknisk Lareanstalt (Royal Coll. of Eng.), Copenhagen. 1923 M. S. in Theoretical and Applied Mechanics, Univ. of Ill. Feb. 1920-May 1922 Asst. to Prof. Suenson in investigational and engineering work; also teaching reinforced concrete and technology of materials in Eng. Coll., Copenhagen. June and July 1922 Instructor in Surveying Camp of same College. Sept. 1922 to June 1923 Graduate Student, Univ. of Illinois. *TT 5.2: SP 2: P 3.2: RC 0.2.* June 1923 to date Designer and Detailer, Kalman Steel Co., Chicago, designed three large reinforced concrete structures, club houses and hotels (total floor area of each 100 000 to 200 000 sq. ft.); analysis of large continuous girders and of various kinds of frames in reinforced concrete buildings. *TT 2.2: SP 0.2: P 1.9: RC 1.* *TT 7.4: SP 2.2: P 5.2: RC 1.2.* Refers to A. E. Lindau, F. E. Richart, A. N. Talbot, W. S. Thomson, H. M. Westergaard.

764 (9) GOODMAN, ARTHUR GUSTAV, 741 Grove Pl., Toledo, Ohio. (Age 22. Born Cedar Rapids, Iowa.) 1924 B. S. C. E., Iowa State Coll. June 1924 to April 1925 Draftsman, Truscon Steel Co., Youngstown, Ohio, detailing and designing reinforced concrete. *TT 2.8: SP 2.8.* April to July 1925 Draftsman and Estimator, Building Products Co., Toledo, Ohio, detailing, designing and estimating reinforced concrete. *TT 0.3: SP 0.3. TT 3.1: SP 3.1.* Refers to T. R. Agg, A. H. Fuller, I. Hausman, A. Marston, C. S. Nichols, R. C. Reese.

765 (15) GOWINS, HARRY, Jr., 1024 Keystone Bldg., Houston, Tex. (Age 23. Born Dallas, Tex.) Oct. 1924 to date student in Civ. Eng. course, International Correspondence Schools. June to Sept. 1919 Flagman, Rodman and Chainman, Dallas County Engrs. *TT 0.8: SP 0.3.* Feb. to Aug. 1920 Flagman, Rodman, Chainman and on topography party, and March 1924 to date Instrumentman and Draftsman, Nagle, Witt, Rollins Eng. Co., Houston, Tex. *TT 1.8: SP 1.8.* Feb. 1921 to Feb. 1923 associated with his father, H. H. Gowins & Son, Contrs. and Bldrs., Dallas, Tex. *TT 2: SP 2.* Feb. 1923 to Feb. 1924 Instrumentman and Draftsman, Eng. Service Co., Inc., Dallas. *TT 1: SP 1. TT 5.1: SP 5.1.* Refers to J. C. Nagle, J. M. Nagle, A. P. Rollins, C. L. Williford, J. F. Witt.

766 (7) GREINER, WALDO KARL, Sparta, Mich. (Age 22. Born Sparta, Mich.) 1925 B. S. in Civ. Eng., Univ. of Mich. *TT 2: SP 2.* Refers to A. J. Decker, L. M. Gram, W. C. Hoad, H. W. King, C. O. Wisler.

767 (4) HALE, HAROLD WINSLOW, 188 N. Franklin St., Wilkes-Barre, Pa. (Age 24. Born Swansea, Mass.) 1922 B. C. E., Northeastern Univ. Sept. 1918 to July 1920 (part of time while at college). Rodman and Transitman with Whitman & Howard, Civ. Engrs. Sept. 1920 to Sept. 1921 (part of time while at college) Chainman, Boston & Albany R. R. *TT 2: SP 2.* Sept. 1922 to Feb. 1923 Grade B Engr. in field party, Massachusetts State Highway Comm., Dept. of Public Works. *TT 0.4: P 0.4.* April 1923 to date Res. Engr., Spring Brook Water Supply Co., on construction of pipe-lines. *TT 2.3: P 2.3: RC 2.3. TT 4.7: SP 2: P 2.7: RC 2.3.* Refers to W. T. Barnes, C. S. Ell, E. A. Gramstorf, J. W. Ingalls, P. C. Nash.

768 (1) HARKNESS, DONALD ERNEST, School of Eng., Auckland Univ., Auckland, New Zealand. (Age 31. Born Nelson, New Zealand.) 1920 B. E., Canterbury Univ. Coll., New Zealand. 4 years with Royal Naval Air Service, as Flight Lieut., and Royal Air Service as Capt. Feb. to July 1917 drafting for Heemof Elec. Eng. factory, Hengelo, Holland. *TT 2.5: SP 2.5* Dec. 1919 to March 1920 Computer and Instrumentman for Sydney (N. S. W.) Harbor Trust, drafting, etc. Jan. to Sept. 1921 Asst. Engr. on railroad construction, Public Works Dept., New Zealand, surveying, designing, inspecting construction. *TT 1.1: P 1.1: RC 0.4: D 0.4.* May to Aug. 1922 Designer, Arrow Head Lake Co., Los Angeles, Cal., designing and computing. *TT 0.3: P 0.3: D 0.3.* Oct. 1922 to Aug. 1923 Designer, Car Equipment Dept., Interborough Rapid Transit Co. of New York, designing and drafting for subway and elevated cars. *TT 0.9: P 0.9: RC 0.9: D 0.9.* Aug. 1923 to Oct. 1924 Designer for Engr. of Structures, New York Central R. R., New York City, designing, estimating, drafting, steel bridges. *TT 1.3: P 1.3: RC 1.3: D 1.3.* Feb. 1925 to date Lecturer in Civ. Eng., School of Eng., Auckland Univ. Coll. *TT 0.4: P 0.4: RC 0.4. TT 6.5: SP 2.5: P 4: RC 3: D 2.9.* Refers to E. J. R. McLaren, T. Pettigrew, J. E. Porter, F. R. Schmid, W. Unger.

769 (8) HARVEY, BERNHARD CARL, 1546 Crosby St., Rockford, Ill. (Age 33. Born Rockford, Ill.) Took correspondence course in surveying and mapping and in civil engineering; at present taking correspondence course in reinforced concrete design. Aug. 1911 to Nov. 1912 Chainman and Rodman with County Surveyor, and Nov. 1912 to March 1914 Asst. County Surveyor, Winnebago County, Ill. *TT 2.6: SP 2.6.* March 1914 to Jan. 1915 with J. H. Sabin Contr. Engr., surveying, mapping and bridge construction. *TT 0.8: SP 0.8.* Jan. 1915 to April 1916 First Asst. Civ. Engr. with Leon de Tissandier, surveying, mapping and engineering. *TT 1.2: P 1.2.* April 1916 to date with Eng. Dept., City of Rockford, until May 1917 as Instrumentman and Draftsman; May 1917 to May 1919 Instrumentman, Draftsman and Supervisor of drafting room; May 1919 to May 1921 Asst. Engr., and since May 1921 City Engr. *TT 9.3: SP 3.1: P 6.2: RC 6.2. TT 14: SP 6.5: P 7.5: RC 6.2.* Refers to L. R. Ash, T. L. Condron, W. W. De Berard, C. B. Dugan, W. L. Hempelmann, T. R. Kendall, S. G. Smith.

770 (7) HEFT, HENRY BARTON, 238 Lincoln Ave., Council Bluffs, Iowa. (Age 25. Born Council Bluffs, Iowa.) 1925 B. S., Iowa State Coll. *TT 2: SP 2.* Refers to T. R. Agg, J. S. Dodds, W. L. Foster, A. H. Fuller, A. Marston, C. S. Nichols.

771 (1) HESS, PAUL ERNEST, 329 East 87th St., New York City. (Age 23. Born New York City.) 1925 S. B., Mass. Inst. Tech. June to Oct. 1924 Carpenter's Helper, Rodman, at times on special engineering work, construction of steam power plant near Fall River, Mass., Stone & Webster, Inc. Aug. 1925 to date Asst. to Supt., in charge of books and general inspection, Mr. Raitt, Huntington, N. Y. *TT 2: SP 2.* Refers to J. B. Babcock, 3d, H. K. Barrows, C. B. Breed, W. M. Fife, C. M. Spofford, C. H. Sutherland.

772 (15) HODGES, THOMAS ARTHUR, 2207 San Antonio St., Austin, Tex. (Age 28. Born Lockhart, Tex.) 1919 B. S. in C. E., Univ. of Tex. June 1919 to date with Elrod Eng. Co., Dallas, Tex., as Res. Engr. on sewers, sewage-disposal plants, water-works, paving, hollow concrete dam, reservoirs; and Office Engr. on details and design, sewers, disposal plants, water-works, reservoirs, including drafting. *TT 8: SP 3: P 5: RC 5: D 2.* Refers to E. C. H. Bantel, J. S. Barlow, F. W. Chappell, H. E. Elrod, J. G. Reagan, T. U. Taylor.

773 (6) HOWALT, WILHELM, 139 Main St., Ridgway, Pa. (Age 45. Born Copenhagen, Denmark.) 1903 C. E., Pol. Coll. of Copenhagen. May to Aug. 1901 Asst. to Prof. in Surveying and Leveling, Pol. Coll., Copenhagen. *TT 2: SP 2.* April 1903 to May 1904 Draftsman, Eng. Dept., Pittsburgh, Shawmut & Northern R. R. Co., Olean, N. Y. *TT 1.1: SP 1.1.* June 1904 to May 1905 Draftsman, Div. Engr.'s office, Buffalo & Susquehanna R. R., Buffalo, N. Y., designing masonry. *TT 1: P 1.* May 1905 to Dec. 1908 Engr., U. S. Leather Co., New York City, and after Nov. 1906 also Chf. Engr., Keystone Glue Co., in full charge of designing and superintending improvements and new construction in connection with 36 tanneries and extract works, and design, contracting and supervision of Keystone Glue Co. plant at Williamsport (cost \$250 000). *TT 3.7: P 3.7: D 3.7.* May 1909 to July 1919 Asst. Engr., New York Central R. R., Grand Central Terminal Improvements, New York City, in charge of design of viaduct steel covering the terminal; also had charge of development and detailing of overhead third rail supports, and of checking for strength plans made by other departments if these plans represented structures subject to train load; investigating and reporting on new types of bumpers; on possibility of predetermining quality of sand as a fine aggregate for concrete based on certain sieving properties which could be determined by quick laboratory test; investigating and doing research work in order to determine reason for and magnitude of internal stresses in rails after having been gagged. *TT 10.2: P 10.2: RC 10.2.* Aug. 1919 to March 1925 Chf. Engr., Central Leather Co., New York City, in full charge of all engineering work partial list of work handled includes: for Harriman (Tenn.) Extract Works, drum dryer building and machinery (1919) (\$40 000) and leach house and machinery (1921) (\$156 000); for Middlesboro (Ky.) Tannery, new boiler installation (1922) (\$15 000); remodeling beam houses at Salamanca (N. Y.) and Coudersport (Pa.) tanneries (1921); Instantan (Pa.) Tannery (1922) and Dell Tannery, Curwensville, Pa. (1923), and waste-disposal plants at Coudersport Tannery (1921) (\$12 000) and Riverside Tannery, Petersburg, W. Va. (1923) (\$3 000); U. S. Leather Co., installing power plant and refinishing department at Elizabeth (N. J.) Warehouse (1920) (\$30 000); for Wallin Leather Co., Grand Rapids, Mich., dry loft (1922) (\$38 000); for N. R. Allen's Sons Co., Kenosha, Wis., reconstructing beam house (1922) (\$50 000); for Keystone Glue Co., Williamsport, Pa., remodeling cook building (1920) (\$6 000) and Spreading Department (1923) (\$15 000); also contracted for and supervised for U. S. Leather Co. warehouse at Richmond, Va. (1920) (\$27 000) and sprinkler system, Elizabeth (1921) (\$25 000); for Keystone Glue Co., new power plant (1923) (\$180 000). *TT 5.7: P 5.7: D 5.7.* April to July 1925 Asst. Chf. Engr. of Elk Tanning Co. and Union Tanning Co., Ridgway, Pa. (The Eng. Depts. of Central Leather Co. and Elk Tanning Co. were consolidated in April 1925) on same work and responsibility. *TT 0.3: P 0.3: D 0.3.* Oct. 1924 to July 1925 Res. Engr., Tannery Waste Disposal Committee of Pennsylvania, in charge of a research (including design and construction of necessary engineering structures and stream studies) for practical and reasonable ways of taking care of tannery wastes. *TT 0.8: P 0.8: D 0.8. TT 22.7: SP 1.1: P 21.6: RC 10.2: D 10.5.* Refers to W. M. Bassett, W. R. Craig, E. P. Lane, H. B. Norton, W. L. Stevenson.

774 (12) HUNT, THOMAS DEWICK, 1404 Thirty-First Ave. South, Seattle, Wash. (Age 39. Born Liverpool, England.) Jan. 1917 to Sept. 1918 and Dec. 1918 to Jan. 1920 Deputy County Engr. with County Engr., King County, Wash., engineering office work. *TT 3.7: P 3.7.* Oct. to Nov. 1918 commissioned 1st Lieut., Engrs., U. S. Army. *TT 0.2: P 0.2: RC 0.2.* Jan. 1921 to date Office Engr., King County Engr.'s office, Seattle, in responsible charge; work consists of preparation of plans, specifications and estimates for highway improvements and design of pavements and structures other than bridges; supervision of drafting and clerical forces. *TT 4.6: P 4.6: D 4.6. TT 8.5: P 8.5: RC 0.2: D 4.6.* Refers to T. R. Beeman, D. H. Evans, G. W. Harris, T. G. McCrory, R. H. Wilson.

775 (12) IRWIN, GIFFORD MELVILLE, 416 Seventeenth Ave., W., Vancouver, B. C., Canada. (Age 40. Born Minnedosa, Manitoba, Canada.) Holds commission of B. C. Land Surveyor. 1919 B. Sc. in Civ. Eng., McGill Univ. 1906 to 1908 (while student at McGill Univ.) Axeman, Chainman and Rodman on surveys, etc. 1908 to 1909 (6 months) Inspector of breakwaters also general work on residency on construction, Grand Trunk Pacific Ry. along Skeena River, B. C. 1910 (about 5 months) ran transit and level, etc., same railway. 1911 to 1912 (over ½ year) had charge of land survey parties. *TT 3.5: SP 2.9: P 0.6: RC 0.6.* 1913 to 1915 with Chf. Engr. of Pacific Great Eastern Ry., supplying information from Provincial Govt. Offices, Victoria, B. C.; knowledge of railway engineering and surveying was required. *TT 2.2: P 2.2: RC 2.2.* 1915 to 1919 Lieut., Canadian Gar. Artillery; 1917 in England and France; Jan. 1918 wounded; while recuperating finished course at McGill Univ. 1919 to 1920 Asst., and 1920 to 1923 Instructor, in Civ. Eng., Univ. of British Columbia; assisted in Surveying, Descriptive Geometry, Foundations and (1921 to 1922) Structural Eng.; had charge of laboratory course in Strength of Materials (1920-1922); lectured in Materials of Eng., Structural Eng., Hydraulic Machines and Roads, Streets and Pavements. 1920 (over 1 month) Timber Tester in Forest Products Laboratories of Canada. 1921 and 1922 (about 4 months each year) Inspector, Instrumentman, etc., for City of Vancouver. *TT 3.5: SP 1.3: P 2.2: RC 2.2.* 1923 to 1925 Engr. with City of Vancouver, chiefly in charge of design and construction of streets; Asst. to Roads and Sewerage Engr. *TT 2.1: P 2.1: RC 2.1: D 2.1.* *TT 11.3: SP 4.2: P 7.1: RC 7.1: D 2.1.* Refers to J. Callaghan, E. A. Cleveland, W. E. Duckering, J. R. Grant, E. G. Matheson.

776 (14) IVY, JOSEPH WITHERS, 716 Scarritt Bldg., Kansas City, Mo. (Age 37. Born Thomson, Ga.) 1910 B. S. in C. E., Ga. School Tech. Last year in school Cons. Engr. (with John Hazlehurst) for Town of Kirkwood, Ga., designing complete water-works and sewer system. *TT 2: SP 2.* July 1910 to March 1918 Asst. Mgr., Mgr. and Designing Engr. on water-works problems, American Cast Iron Pipe Co., Kansas City, Mo., and Dallas, Tex. *TT 7.7: SP 0.7: P 7: RC 7: D 6.* March 1918 to Jan. 1919 Secy., hydrant, valve and cast iron pipe manufacturers, War Service Bureau, Washington, D. C., constr. Div., U. S. Army; Council National Defense, War Industries Board; solved water pipe-line problems, particularly distribution mains, on cantonments, camps and special manufacturing plants in United States and France. *TT 0.8: P 0.8: RC 0.8: D 0.8.* Jan. 1919 to date Mgr., Advisory and Designing Engr. on water-works problems, American Cast Iron Pipe Co., Kansas City. *TT 6: P 6: RC 6: D 6.* *TT 16.5: SP 2.7: P 13.8: RC 13.8: D 12.8.* Refers to E. B. Black, C. S. Foreman, B. B. Hodgman, E. E. Howard, R. E. McDonnell, A. Maitland, Jr.

777 (11) JOHNSON, CORTES, City Engr.'s Office, Long Beach, Cal. (Age 46. Born Alexandria, Mo.) 1904 B. S. in C. E., Univ. of Mich. Sept. 1904 to June 1905 Asst. in Civ. Eng., Iowa State Coll., teaching surveying and drawing. *TT 2.8: SP 2.8.* July 1905 to March 1906 Engr., Des Moines and Mississippi Levee Dist. No. 1, in charge of reconstruction of 9 miles of levee and some dikes or groins in Des Moines River. *TT 0.7: P 0.7: RC 0.7.* March to Dec. 1906 Instrumentman, Chicago & Northwestern Ry. *TT 0.8: SP 0.8.* Nov. 1907 to Sept. 1913 in private practice of land surveying and drainage, and developing some timber land into a farm, most of time on latter. *TT 0.5: P 0.5: RC 0.5.* Sept. 1913 to June 1915 Head of Mathematics Dept., Iowa Wesleyan Coll. *TT 1.8: SP 1.8.* Sept. 1916 to June 1918 Draftsman, Atchison, Topeka & Santa Fe Ry. *TT 1.8: SP 1.8.* June 1918 to April 1923 Draftsman and Chf. Draftsman, and April 1923 to date Asst. Engr. in charge of office work, City Engr.'s office, Long Beach, Cal. *TT 7: SP 4.8: P 2.2: RC 2.2.* *TT 15.4: SP 12: P 3.4: RC 3.4.* Refers to G. E. Baker, B. H. Colby, B. F. Dupuy, A. L. Ferver, C. H. Shaw, R. D. Van Alstine, L. A. Wilson.

778 (8) KERANEN, GEORGE MATTHEW, 5808 South Park Ave., Chicago, Ill. (Age 24. Born Red Lodge, Mont.) 1923 B. S. in Civ. Eng., State Coll. of Wash.; 1925 M. S. in Civ. Eng., Univ. of Ill. June to Sept. 1921 Instrumentman, and June to Sept. 1922 Foreman, responsible for repair and maintenance of 150 miles of trail and telephone lines, U. S. Forest Service. *TT 2: SP 2.* June to Sept. 1923 Draftsman, Washington State Highway Dept., earthwork computation, drafting and some concrete design. *TT 0.3: P 0.3.* June to Sept. 1924 Draftsman, Delaware, Lackawanna & Western R. R. Co., most of work in field as Asst. to Chf. Engr. on construction of concrete warehouse. *TT 0.2: P 0.2.* Sept. 1923 to June 1924 and Sept. 1924 to June 1925 Research Asst., Univ. of Illinois, Eng. Experiment Station, one-half of time on post-graduate study and one-half of time on special investigations of temperature stresses in continuous arches and design of Scherzer bascule bridges. *TT 1.5: P 1.5.* June 1925 to date Structural Draftsman, Southern Park Comm., Chicago, Ill.,

designing and checking, latter mostly on continuous cantilever bridge. *TT 0.1: P 0.1: D 0.1. TT 4.1: SP 2: P 2.1: D 0.1.* Refers to R. S. Crossman, C. R. Hoyt, A. N. Talbot, C. C. Williams, W. M. Wilson.

779 (14) KINNISON, HARVEY BANKS, 23 Federal Bldg., Topeka, Kans. (Age 35. Born Hopkins, Mo.) 1914 B. S. in C. E., Univ. of Idaho. June 1914 to Aug. 1915 Asst. County Engr., Bonner County, Idaho; Instrumentman in charge of field party, locating highways, land subdivision, mine surveying and location, drafting. *TT 3.2: SP 3.2.* Sept. 1915 to Feb. 1916 with Earl Davis, Atascadero, Cal., assisting in construction of reinforced concrete residences. *TT 0.5: SP 0.5.* March 1916 to July 1918 Engr., Atascadero Colony, Instrumentman in charge of field party, land subdivision, locating highways, location and levels for drain ditches, platting and computing in office. *TT 2.4: SP 2.4.* Aug. 1918 to July 1925 Asst. Engr., then Engr., and later Hydr. Engr., U. S. Geological Survey, in charge of field work and prepared report on duty of water for irrigation of rice, canal capacities, seepage losses from canals, evaporation from canals and rice fields, establishing gauging stations on streams and canals, rating the stations computing mean daily, monthly and yearly discharge; preparing data and writing reports; approx. 3 years under Dist. Engr.; two years Engr. in charge of Topeka Office; 2 years Dist. Engr. of Kansas and Oklahoma with office in Topeka. *TT 7: P 7: RC 4.2. TT 13.1: SP 6.1: P 7: RC 4.2.* Refers to C. E. Ellsworth, N. C. Grover, J. C. Hoyt, J. A. Norris, H. A. Rice, H. B. Walker, E. L. Williams.

780 (1) KLEEN, LOTHAR FLINCHNOT, 71 West Twenty-third St., Room 1500, New York City. (Age 37. Born Brooklyn, N. Y.) Aug. 1910 to Aug. 1913 Transitman and Draftsman, Delaware, Lackawanna & Western R. R. Co., Hoboken, N. J. *TT 3: SP 1: P 2: D 2.* Aug. 1913 to Jan. 1916 Asst. Res. Engr., Constr. Dept., Erie R. R., responsible charge of construction of yards, bridges and grade crossing elimination. *TT 2.4: P 2.4: RC 2.4.* Jan. 1916 to Jan. 1919 Asst. Engr., Hudson River Connecting R. R., Albany, and New York Central R. R., New York City, location and construction, design of arches, structures and yards. *TT 3: P 3: RC 1: D 2.* Jan. 1919 to Jan. 1920 Field Engr., Gen. Motors Co., in charge of design and supervision of structural and mechanical erection. *TT 1: P 1: RC 1.* Jan. 1920 to May 1921 Reinforced Concrete Designer, Dwight P. Robinson Co., Inc., structural design, power plants and industrial buildings. *TT 1.4: P 1.4: D 1.4.* June to Nov. 1921 Asst. Engr. M. of W., N. Y. C. R. R., design of special track and way condition, testing and investigation of patents and processes. *TT 0.5: P 0.5: D 0.5.* Nov. 1921 to June 1924 Asst. Engr., Passaic Valley Sewerage Comm., Newark, N. J., hydraulic studies and design of structures for sewage disposal; Oct. 1923 to Aug. 1924 also Structural Engr. for Associated Engrs. for Town of Kearney, N. J., in responsible charge of design of three highway bridges. *TT 2.8: P 2.8: RC 1.2: D 2.6.* Aug. 1924 to Jan. 1925 Civ. Engr., Public Service Production Co., in responsible charge of layout of all construction, Harrison Gas Works and Essex Power Station. *TT 0.4: P 0.4: RC 0.4.* Jan. 1925 to date Structural Designer, Erie R. R., New York City, design of bridges and structures. *TT 0.5: P 0.5: D 0.5. TT 15: SP 1: P 14: RC 6: D 9.* Refers to L. G. Cutler, R. E. Dougherty, H. F. King, W. G. Taylor, J. R. Van Duyn.

781 (12) LEIGHTON, CHESTER ADAM, 2050 Barclay St., Vancouver, B. C., Canada. (Age 39. Born Portland, Me.) 1908 B. A., Bowdoin Coll., Brunswick, Me. 1908 to 1911 Rodman, Transitman and Inspector, Constr. Dept., New York Central & Hudson River R. R., Dist. Engr.'s Office, office and field work in connection with construction of tracks, engine houses and stations. *TT 3: SP 3.* 1911 to 1914 Transitman and Field Engr., J. G. White & Co., New York City, report on hydro-electric development at Grand Mere, and construction of power house and dam at Parr Shoals, S. C. *TT 3: SP 3.* 1914 to 1915 Asst. Supt., Wm. H. Ellis & Sons, Boston, Mass., on construction of concrete and timber pier at New Bedford, Mass. *TT 1: P 1.* 1915 to 1916 Asst. Supt., Sperry Eng. Co., New Haven, Conn., on construction of brass rolling mills and casting shops at Waterbury, Conn. *TT 1: P 1.* 1916 to 1918 Asst. Supt. and Supt. for Stone & Webster, Boston, on construction of open hearth steel furnace at Bridgeport, Conn., and ordnance repair shops for U. S. Army in France. *TT 2: P 2: RC 1.* 1918 to 1919 Industrial Supt., Atlantic Loading Co., New York City, on design, installation and maintenance of machinery for loading high explosive shells at Amatol, N. J. *TT 1: P 1: RC 1: D 0.5.* 1919 to July 1921 Gen. Mgr., Gibbs Mueller Co., Philadelphia, Pa., on construction of concrete roads for State of Pennsylvania. *TT 1.5: P 1.5: RC 1.5.* July 1921 to date Constr. Engr., Northern Constr. Co., Ltd., Vancouver, B. C., on construction of hydro-electric plant at Great Falls, Manitoba, foundations of Ballantyne Pier and Elevator No. 2, at Vancouver, and design and construc-

tion of steel bridge across Second Narrows at Vancouver. TT 4: P 4: RC 3: D 1. TT 16.5: SP 6: P 10.5: RC 6.5: D 1.5. Refers to L. T. Alden, B. D. Burnell, R. E. Dougherty, V. F. Hammel, F. Kurtz.

782 (1) LEONARD, SAMUEL JOHN, Columbia Univ., New York City. (Age 30. Born Washington, D. C.) 1917 C. E., Cornell Univ. May to Sept. 1917 and May to Sept. 1919 Asst. Supt. of Constr., Raymond Concrete Pile Co., in charge of small jobs, minor position on dock work at Sparrows Point, Md. TT 2.6: SP 2.6. 1917 to 1919 Provisional First Lieut., Temporary Capt., Corps of Engrs., U. S. Army. Sept. 1919 to April 1920 Draftsman, B. F. Goodrich Rubber Co., Dept. of Bldg. Design, designing minor alterations for buildings. TT 0.7: SP 0.7. Aug. 1923 to Oct. 1924 Inspector, Pennsylvania State Highway Dept., in charge of concrete roadway construction (under Dist. Engr.); assisted in office with routine work of establishing grade lines and computing earthwork. TT 1.1: SP 1.1. Oct. 1924 to date Laboratory Asst., Testing Laboratories, Columbia Univ., Dept. of Civ. Eng., commercial testing and assisting professors. TT 0.8: SP 0.8. TT 5.2: SP 5.2. Refers to F. A. Barnes, A. H. Beyer, A. D. Estes, J. K. Finch, H. G. Harper, E. E. Haskell, W. J. Krefeld, O. M. Leland, E. B. Lovell, H. N. Ogden, J. S. Peck, M. M. Upson, L. C. Urquhart.

783 (5) LIVINGSTONE, KENNETH MACKAY, 1249 Kenyon St., N. W., Washington, D. C. (Age 25. Born Washington, D. C.) 1921 B. S. in Min. Eng., McGill Univ. May to Oct. 1918 Steel Checker, then Foreman of Steel Dept. and later in Ship-Fitting and Laying Out Dept., Virginia Shipyards, Alexandria, Va. June to Sept. 1919 Jun. Engr., Benedict Coal Corporation, at mines in Benedict, Va. June to Oct. 1920 Jun. Geologist, Canter Oil Co., Tulsa, Okla., field work. TT 2: SP 2. June to Nov. 1921 Supt. in charge of reconstruction and renovation of 9-story office building of Federal American National Bank, Washington, D. C. TT 0.5: P 0.5. Nov. 1921 to Aug. 1922 building houses, under contract, in Virginia and District of Columbia. TT 0.7: P 0.7. June 1922 to date in private practice as Livingstone Constr. Co., constructed sewer systems and water-works in several places and has done road work for States of Maryland and Delaware, also private work in Virginia, also constructing houses. TT 3: P 3. TT 6.2: SP 2: P 4.2. Refers to F. F. Gillen, D. J. Howell, V. LeMay, H. M. MacKay, C. H. Tompkins.

784 (8) McLEAN, CECIL JOHN, 421 West First St., Dixon, Ill. (Age 27. Born Vernon, Mich.) 1920 B. S., Mich. State Coll.; 1924 M. S. in Eng., Univ. of Mich. June to Oct. 1918 Rodman and Inspector, and June to Oct. 1919 Instrumentman, Michigan State Highway Dept. TT 2: SP 2. June 1920 to Sept. 1923 with same Dept., until July 1921 as Draftsman in Bridge Div.; from July 1921 to Jan. 1922 and June 1922 to Sept. 1923 Res. Engr. on bridge construction, 3-span arch bridge across Flint River at Flushing, Mich., and 3 fixed steel spans and one swing span over Grand River at Grand Haven, Mich.; Jan. to June 1922 on design of bridge structures. TT 3.2: SP 1.1: P 2.1: SP 1.7: D 0.4. Sept. 1923 to June 1924 post-graduate work, Univ. of Michigan. TT 0.8: SP 0.3. June 1924 to June 1925 Res. Engr. on construction of 4000-h.p. hydro-electric power plant on Rock River at Dixon, Ill., Holland, Ackerman & Holland, Cons. Engrs. TT 1: P 1: RC 1. June 1925 to date Hydr. Engr., Illinois Northern Utilities Co., Dixon. TT 0.1: P 0.1: RC 0.1. TT 6.7: SP 3.4: P 3.3: RC 2.8: D 0.4. Refers to H. K. Holland, R. K. Holland, H. W. King, R. H. Sherlock, N. Van Eenam, C. O. Wisler.

785 (3) MAEDER, LLOYD ALEXANDER, Box 113, Clymer, N. Y. (Age 20. Born Springville, N. Y.) 1925 B. S. E., Coll. of Eng., Univ. of Mich. June to Sept. of years 1922-1924 with Park Dept., Buffalo, N. Y., drafting, Rodman and Instrumentman. July 1925 to date Jun. Asst. Engr., Grade 1, New York State Highway Dept., Inspector and Instrumentman. TT 3: SP 2.3: P 0.7. Refers to A. H. Blanchard, A. J. Decker, W. C. Hoad, R. L. Morrison, H. E. Riggs, C. O. Wisler.

786 (13) MEYERHOLZ, RHEINIER IVAN, 224 Saratoga, Mt. View Rd., Cupertino, Cal. (Age 34. Born Cupertino, Cal.) 1914 A. B., Leland Stanford, Jr., Univ. June 1914 to Sept. 1916 in private practice as Contr.; constructed concrete and timber bridges, small buildings, foundations and water tank towers. TT 2.3: P 2.3: RC 2.3. Sept. 1916 to March 1917 Inspector and Res. Engr. on county highway construction for Santa Clara County, Cal. TT 0.6: SP 0.3: P 0.3: RC 0.3. March to May 1917 Draftsman, Moore Scott Iron Works, Oakland, Cal., tracing and detailing ship designs. TT 0.2: SP 0.2. May 1917 to July 1918 Instrumentman, Chf. of Party and Res. Engr. on irrigation works, Valler (Mont.) Land & Water Co., construction of canals, bridges, chutes, drops, etc. TT 1.2: SP 0.3: P 0.9: RC 0.9. Sept. 1918 to March 1922 Draftsman in office and Field Engr. for Fred H. Tibbetts, Field

Engr. having charge of construction on irrigation works in Sacramento Valley, Cal., pumping plants, irrigation and drainage structures. *TT 3.4: SP 0.6: P 2.8: RC 1.8: D 1.* March to June 1922 Jun. Engr., California State Dept. of Public Works, Div. of Irrigation and Eng., special investigation of water resources of California, Compiler of data and report writer. *TT 0.3: SP 0.3.* June to Sept. 1922 Engr., Merritt Concrete Products Co., San Jose, Cal., in charge of construction of pipe-lines. *TT 0.3: P 0.3: RC 0.3.* Sept. 1922 to Jan. 1923 Draftsman with Fred H. Tibbetts, design of irrigation works, subdivision and right-of-way computations. *TT 0.3: P 0.3: D 0.3.* March to June 1923 Supt. of Constr. for H. H. Larsen, in charge of construction of reservoirs and retaining wall work in connection with lumber mill construction. *TT 0.3: P 0.3: RC 0.3.* June 1923 to Feb. 1924 in private practice as Contr., construction of highway bridges, culverts and road grading. *TT 0.7: P 0.7: RC 0.7.* Feb. 1924 to date Asst. Engr., Pacific Gas & Elec. Co., San Francisco, Cal., in charge of design and construction of warehouses, garage and shop buildings. *TT 1.4: P 1.4: RC 0.7: D 0.7.* *TT 11. SP 1.7: P 9.3: RC 7.3: D 2.* Refers to N. D. Baker, H. M. Chadwick, C. D. Marx, R. Matthew, I. C. Steele, F. H. Tibbetts, R. G. Wadsworth.

787 (7) MITRA, SURENDRA NATH, Room 631, Y. M. C. A., Des Moines, Iowa. (Age 25. Born Calcutta, India.) 1925 B. of E., State Univ. of Iowa. June to Sept. 1924 Draftsman, Peoples Light Co., Davenport, Iowa. June 1925 to date Draftsman, Canfield Eng. Co., Des Moines. *TT 2.1: SP 2.1.* Refers to L. A. Canfield, R. B. Kittredge, B. J. Lambert, F. A. Nagler, W. G. Raymond, S. M. Woodward.

788 (11) MORRILL, ROBERT WESLEY, 1110 E. Elm Ave., San Gabriel, Cal. (Age 23. Born South Hampton, N. H.) 1924 B. S., Dartmouth Coll. 1925 C. E., Thayer School of Civ. Eng. April to Sept. 1924 Jun. Highway Engr., Illinois Highway Dept., Bridge Office, on design, computations and drafting, concrete bridges. July 1925 to date Senior Topographical Draftsman, San. Sewer Div., Eng. Dept., Los Angeles, Cal., drawing plans and profiles, field investigations and design of sewers. *TT 2.4: SP 2.4: D 0.4.* Refers to P. S. Dow, R. Fletcher, C. A. Holden, R. R. Marsden, A. P. Richmond, Jr.

789 (11) MORRISON, DEMING WILLIAM, Box 347, Wheatland, Wyo. (Age 22. Born Lexington, Ky.) 1925 A. B. in Civ. Eng., Leland Stanford, Jr., Univ. *TT 2: SP 2.* Refers to J. A. Elliott, J. C. L. Fish, L. B. Reynolds, E. C. Thomas, C. B. Wing.

790 (8) MORTON, WILLIAM STANTON, 6325 Kenwood Ave., Chicago, Ill. (Age 38. Born near New Bern, N. C.) 1906 to 1920 Chainman, Rodman, Instrumentman, Draftsman, Res. Engr. and Asst. Engr. for railroads, consulting engineers and U. S. Govt. engineers, including 1½ years (about) with John W. Hays, on design and construction of small water-works and sewerage systems (aggregate \$250 000); about 1 year with W. G. Kirkpatrick as Asst. Engr. on design of small sewer systems, disposal plants, etc., and in charge of field party on various hydraulic surveys and investigations; about 1 year Asst. Engr. to C. P. E. Burgwyn, C. E., Richmond, Va., as Locating Engr. on survey and estimates for 135 miles of proposed railroad from Greensboro, N. C., to Norfolk, Va.; 6 months Asst. Engr. to R. A. Colvin, C. E., New Bern, N. C., on construction of brick and asphalt paving (\$150 000) at Goldsboro, N. C.; 7 months Asst. Engr. in charge of hydraulic dredging (about \$400 000) on Arkansas River for Missouri Pacific R. R.; 9 months Engr., Valuation Dept., Missouri, Kansas & Texas R. R., representing railroad on government inventory of 400 miles of main line in Texas; part of time in private practice on land surveys, location and construction of short line railroads, highways, small sewer systems, street paving, investigations and expert testimony, including resurvey and inventory of Virginia & Carolina Southern Ry. (51 miles); located and constructed 26 miles of hard surfaced highway in Johnson County, N. C.; survey, report and expert testimony in flood-damage, vicinity of Danville, Va.; laid out additions to Dillwyn and Boykins, Va., Bristol and Sweetwater, Tenn., Durham, N. C., and other towns; designed and built sewers and paving on some of these aggregating about \$300 000; located and constructed three standard gauge logging roads (total mileage 192 miles). *TT 15: SP 6: P 9: RC 7: D 4.* July 1920 to Dec. 1923 Asst., Engr. Corps, Chicago & Eastern Illinois R. R., designed addition to freight yard at Dolton; assisted on design and estimates for new freight yard at Evansville, Ind.; made survey and preliminary estimate for track elevation through Chicago Heights, Ill.; various surveys and investigations for deflection in turntables; computed construction period for reproducing C. & E. I. Ry. for valuation; various track and yard plans and estimates. *TT 3.5: P 3.5: RC 1: D 2.5.* Jan. 1924 to Feb. 1925 with Illinois Central R. R., 5 months as Track Designer on track layout in proposed electrified zone, Chicago and vicinity, remainder of time Chf. of Party on surveys and estimates for line revision and grade reduction in Iowa. *TT 1.2: P 1.2: RC 0.7: D 0.5.*

March 1925 to date with Chicago & Western Indiana R. R., 4 months as Field Engr. in direct charge of three field parties on layout of pile trestle, sand embankment, masonry, caissons, cribbing, track changes, base lines, etc., in connection with \$4 000 000 track elevation program in Chicago; since then Asst. Engr. on this work. *TT 0.4: P 0.4: RC 0.4. TT 20.1: SP 6: P 14.1: RC 9.1: D 7.* Refers to A. C. Butterworth, W. A. Christian, O. Froseth, W. T. Gray, E. A. Hadley, F. D. Nash, D. E. Pendleton, J. H. Pratt, V. R. Walling.

791 (11) NEFF, NAT HARRY, City Hall, Santa Ana, Cal. (Age 37. Born Scribner, Nebr.) Oct. 1906 to Sept. 1907 Rodman and Leveler, and June to Sept. 1909 Leveler, Chicago, Burlington & Quincy R. R. Sept. 1907 to April 1910 Student, C. E. course, Univ. of Nebraska. June to Sept. 1908 Rodman, U. S. Land Survey, Yellowstone Forest Reserve. *TT 1.9: SP 1.9.* April 1910 to April 1912 Supt. of Agricultural Instruction, Santee Normal Training School (Indian). *TT 2: SP 2.* April 1912 to April 1913 private work, engineering and surveying in Southern California. *TT 1: P 1.* April 1913 to April 1914 Asst. City Engr., Santa Ana, Cal., street paving and sewer design. *TT 5: P 1.* April 1914 to Jan. 1917 Field Engr. in charge of construction of concrete and asphalt pavements, culverts and bridges, Orange County (Cal.) Highway Comm. *TT 2.7: P 2.7: RC 2.7: D 2.7.* Jan. 1917 to Jan. 1920 Supt., Highway Maintenance Dept., Orange County, directly responsible for maintenance and reconstruction of 150 miles of concrete and asphalt roads, bridges, etc. *TT 3: P 3: RC 3: D 3.* Jan. 1920 to Jan. 1925 Div. Engr., Orange County Road Dept., design, construction and maintenance of roads and bridges. *TT 5: P 5: RC 5: D 5.* Jan. 1925 to date City Engr., Street Supt. and Sewer Supt., Santa Ana. *TT 0.5: P 0.5: RC 0.5: D 0.5.* *TT 17.2: SP 3.9: P 13.3: RC 11.2: D 11.2.* Refers to S. V. Z. Cortelyou, G. S. Hinckley, G. W. Jones, J. B. Lippincott, E. A. Rowe, C. R. Sumner.

792 (10) PATRICK, FREEMAN VAUGHN, Lenow, Tenn. Graduating student awarded Kruesi Prize of Society Junior Membership. (Age 23. Born Lenow, Tenn.) 1925 B. S. in C. E., Univ. of Tennessee. June 1921 to Sept. 1922 and June to Sept. of years 1923-1924 Instrumentman, Tennessee Dept. of Highways. *TT 3.3: SP 3.3.* Refers to R. H. Baker, C. N. Bass, W. W. Carson, A. P. Davis, H. D. Dewell, N. W. Dougherty, R. Farnham, M. S. Ketchum, G. C. Mason.

793 (8) ROSNER, MAX, 3233 Cortez St., Chicago, Ill. (Age 39. Born Adjud, Roumania.) 1909 B. S., Cooper Union. 1914 C. E., Pol. Inst. of Brooklyn. 1912 to 1914 Structural Steel Detailer and Checker, Levering & Garrigues, New York City, on industrial buildings, hotels, power houses, etc. *TT 4: SP 3: P 1.* 1914 to 1915 Structural Steel Designer, Detailer, Snare & Triest, New York City, sugar refineries, elevator stations on Long Island Elevated Lines. *TT 1: P 1.* 1915 to 1918 Structural Designer, Elec. Bond & Share Co., New York City, steel, concrete, power-house, yard structures, transmission lines and towers, substations. *TT 3: P 3: D 2.* March to Aug. 1918 Structural Designer, Sinclair Refining Co., Chicago, Ill., steel concrete oil stations. *TT 0.5: P 0.5.* Aug. 1918 to Jan. 1919 Checker, structural steel, miscellaneous structures, New England Steel Co., Everett, Mass. *TT 0.4: P 0.4.* Jan. 1919 to March 1920 Structural Designer, Chf. Draftsman, Helbach & Winters, Chicago, theatres, industrial buildings, etc. *TT 1.2: P 1.2: RC 1.* 1920 to 1921 Structural Designer, The Foundation Co., Chicago; designed two 30 000-kw. additions to Kansas City Power & Light Co., turbine room, switch room, sub and super structure. *TT 1: P 1: D 1.* 1921 to date with Fridstein & Co., Chicago, as Structural Engr., Chf. Engr., theatres, hotels; had charge of Structural Dept. and designed Webster and Belden Hotels, Shoreland (under construction), and Harding, Tower and Congress Theatres, all in Chicago. *TT 4: P 4: RC 3.7: D 3.7.* *TT 15.1: SP 3: P 12.1: RC 4.7: D 6.7.* Refers to F. W. Adgate, A. A. Cother, F. W. Dencer, M. Fridstein, J. H. Heald, L. J. Hotchkiss.

794 (11) ROSS, CHARLES MORRISON, Box 2512, San Francisco, Cal. (Age 27. Born Bradford, Pa.) 1925 B. S. in C. and I. E., Colo. Agri. Coll. At present Deck Officer, U. S. Coast and Geodetic Survey. *TT 2: SP 2.* Refers to S. W. Cooper, R. W. Gelder, F. P. Goeder, A. C. Rose, P. C. Whitney.

795 (1) SCHMIDT, EDWARD CARL, 258 Argyle Rd., Brooklyn, N. Y. (Age 22. Born Brooklyn, N. Y.) 1924 C. E., Pol. Inst. of Brooklyn. March 1925 to date Draftsman, Third Ave. R. R., New York City. *TT 2.4: SP 2.4.* Refers to H. R. Codwise, H. P. Hammond, C. W. Hudson, E. M. T. Ryder, E. J. Squire, F. L. Stearns.

796 (10) SIMONS, GEORGE WASHINGTON, Jr., 364 Avondale Ave., Jacksonville, Fla. (Age 34. Born Portland, Ore.) 1912 S. B. in Gen. Sci., Beloit (Wis.) Coll. 1915 S. B., Mass. Inst. Tech. June to Sept. 1913 Draftsman and Field Engr., Aetna Eng. Bureau of

Chicago, drafting, sewer design, and engineering work for cross-sectioning, street work, etc. TT 2.3: SP 2.3. June to Oct. 1915 Asst. to Prof. G. C. Whipple at Harvard, general design and investigation in connection with oyster pollution. TT 0.3: P 0.3. Oct. 1915 to June 1916 Asst. in Civ. Eng. Dept., Massachusetts Inst. of Technology; also some drafting and investigation. TT 0.7: P 0.7: D 0.2. July 1916 to May 1925 Chf. San. Engr., Florida State Board of Health; Director of Dept.; general supervision over sanitary engineering works in State; designed and directed installation of institutional sewer and sewage-disposal systems; supervised and passed on all plans for water-purification works in State; as Engr. in Chg. designed and directed large realty development at St. Petersburg. TT 8.8: P 8.8: RC 8.8: D 3. May 1925 to date Chf. Engr., Consolidated Development & Eng. Corporation, Inc., Jacksonville, Fla.; Cons. and Practicing Engr., municipal work; at present Chf. Engr., designing and directing installation of large property development adjacent to Jacksonville. TT 0.3: P 0.3: RC 0.3: D 0.3. TT 12.5: SP 2.3: P 10.2: RC 9.1: D 3.5. Refers to H. K. Barrows, J. E. Craig, W. W. Fineren, R. D. Gladding, P. E. Green, G. B. Hills, H. H. Hyman, T. R. Kendall, H. M. Pirnie, G. R. Ramsey, C. M. Spofford.

797 (7) SIMPSON, HAWLEY STARR, 222 Police Headquarters, Detroit, Mich. (Age 26. Born Washta, Iowa.) 1922 B. S. C. E., Univ. of Mich. June 1919 to Sept. 1920 Draftsman (over 2 months), Instrumentman (over 2 months) and Chf. of Party (over 9 months), Michigan State Highway Dept., Lansing, Mich. TT 3.2: SP 2.4: P 0.8: RC 0.8. June to Sept. 1922 Field Engr. with Colman & Harding, Detroit, Mich. TT 0.2: P 0.2: RC 0.2. Sept. 1922 to Jan. 1923 Res. Engr., Michigan State Highway Dept., Cadillac, Mich. TT 0.4: P 0.4: RC 0.4. April 1923 to July 1925 Engr. with Verner, Wilhelm & Molby, Detroit. TT 2.2: P 2.2: RC 2.2: D 0.2. July 1925 to date Traffic Engr., Mayor's Committee on Traffic, Detroit. TT 6: SP 2.4: P 3.6: RC 3.4: D 0.2. Refers to C. O. Barton, J. B. T. Colman, E. P. Goodrich, H. W. King, H. E. Riggs.

798 (12) SMITH, JOSEPH LAWRENCE, 304 West 36th St., Seattle, Wash. (Age 40. Born Seattle, Wash.) 1905 to 1908 (3 years) student, Univ. of Washington, School of Mines. Summer 1906 (4 months) Levelman on railroad at Nome, Alaska. Summer 1907 (4 months) in charge of three locating parties on ditch work in Nome for G. M. Ashford, C. E., at Candle Creek. 1907 (2 months) located 40-mile ditch line for Banquist & Pepper, Candle Creek. Summer 1908 (3 months) Engr. in charge of location and construction of 8 miles of ditch, Juliene Mining Co., Nome. TT 2.1: SP 1: P 1.1: RC 1.1. 1908 to date in private practice as Contr., Seattle, Wash., 4 years on grading and sidewalk construction; 5 years on state, city and county grading, paving; and since 1917 on paving, grading, water-works and sewers (work averaging \$600 000 annually), City of Seattle, State of Washington and King County. TT 17: P 17: RC 17. TT 19.1: SP 1: P 18.1: RC 18.1. Refers to T. R. Beeman, J. M. Clapp, A. S. Downey, D. H. Evans, G. H. Jamison, T. G. McCrory, O. A. Piper, J. B. Warrack, W. F. Way, C. Wernecke.

799 (9) STAFFORD, JULIAN TATE, 448 Marshall St., Gary, Ind. (Age 24. Born Tarkio, Mo.) 1925 B. S. in C. E., Univ. of Cal. Aug. 1921 to Aug. 1922 Instrumentman, Flood Control Dept. of Los Angeles County, Los Angeles, Cal. June 1925 to date Steel Detailer, American Bridge Co., Gary, Ind. TT 3.1: SP 3.1. Refers to R. E. Davis, F. W. Dencer, C. Derleth, Jr., B. A. Etcheverry, C. G. Hyde.

800 (9) STOUT, ERL WAYNE, 423 South 11th St., Hamilton, Ohio. (Age 32. Born Hamilton, Ohio.) Sept. 1911 to Sept. 1913 Rodman, City of Hamilton, Ohio. TT 2: SP 2. Sept. 1913 to Jan. 1922 Inspector and Transitman, Baltimore & Ohio R. R., bridges and buildings. TT 7: P 7: RC 7. Jan. 1922 to Jan. 1923 Asst. City Engr., Trinidad, Colo., street paving, sewers and surveys. TT 1: P 1: RC 1. Jan. to June 1923 Res. Engr., State of Colorado, bridges and surveys. TT 0.5: P 0.5: RC 0.5. June 1923 to Dec. 1924 Transitman, B. & O. R. R. TT 1.5: P 1.5: RC 1.5. Jan. to July 1925 Engr. in Chg., B. & O. R. R. bridges. TT 0.7: P 0.7: RC 0.7. TT 12.7: SP 2: P 10.7: RC 10.7. Refers to L. R. Douglass, W. W. Gwathmey, Jr., W. J. Howard, R. H. Lee, W. R. Lewis, J. P. Ray, E. J. Southerington.

801 (10) TAPLEY, GEORGE MANNING, Care, Dixie Constr. Co., Dadeville, Ala. (Age 23. Born Haverhill, Mass.) 1924 B. S., Mass. Inst. Tech. Aug. 1924 to June 1925 Draftsman and Estimator, Alabama Power Co., Birmingham, Ala., preliminary study of hydro plants to determine available power and cost of construction. At present with Dixie Constr. Co., Dadeville, Ala. TT 2.9. Refers to H. K. Barrows, C. R. Hopper, G. E. Russell, C. M. Spofford, L. G. Warren.

802 (4) TILTON, CLAIRE EUGENE, Hillcrest Apartment, Phillipsburg, N. J. (Age 39. Born Fullerton, Pa.) Feb. to May 1912 Chainman with A. D. Chidsey, C. E., Easton, Pa. TT 0.3: SP 0.3. May to Sept. 1912 Rodman, Eng. Dept., Easton. TT 0.3: SP 0.3. Sept. 1912 to April 1913 Rodman, South Easton Water Co., Easton. TT 0.6: SP 0.6. April 1913 to Jan. 1914 Transitman with R. P. Howell, C. E., Phillipsburg, N. J. TT 0.6: SP 0.6. Jan. 1914 to May 1918 Asst. Town Engr., and May 1918 to Jan. 1922 Town Engr., Phillipsburg. TT 8: SP 2.3: P 5.7: RC 4.7: D 4.7. Jan. 1922 to date in private practice. TT 3.6: P 3.6: RC 3.6: D 3.6. TT 13.4: SP 4.2: P 9.2: RC 8.2: D 8.2. Refers to F. C. Carstarphen, H. A. Kelly, J. McNeal, C. E. Parry, L. Perry, T. J. Wasser.

803 (11) TRUCKEY, LAWRENCE JOSEPH, City Hall, Venice, Cal. (Age 26. Born Cheyenne, Wyo.) July to Oct. 1915 and June to Sept. of years 1916 and 1917 Rodman and Recorder, U. S. Gen. Land Office. TT 0.7: SP 0.7. Sept. 1917 to March 1918 in World War, also student, Univ. of Washington. Nov. 1918 to April 1919 with Lumberman's Logging & Eng. Co., Portland, Ore., as Draftsman and Leveler, locating logging railroad. TT 0.5: SP 0.5. April to July 1919 Leveler, Southern Pacific R. R. TT 0.3: SP 0.3. July to Dec. 1919 Transitman, Wyoming Highway Comm. on reconnaissance and preliminary surveys. TT 0.5: SP 0.5. Jan. to June 1920 Transitman, California Highway Comm., Hopland, Cal. TT 0.5: SP 0.5. Sept. 1920 to June 1921 student, Univ. of Wyoming. TT 0.3: SP 0.3. July 1921 to July 1922 Transitman and Draftsman with an Engr., Los Angeles, Cal., subdivision layouts, road and outfall sewer construction, field and office. TT 1: SP 1. July 1922 to July 1923 Asst. City Engr., Watts, Cal., direct charge and supervision of field and office, direct charge of all municipal design, street, sewer, etc. TT 1: P 1: RC 1: D 0.5. July 1923 to July 1925 Asst. City Engr., Office Engr., City of Venice, direct supervision of constructive program, involving construction of jetties, sea walls, sewers, canal bridges, paving, reclaiming submerged and low land, installation of lighting systems, etc. Since July 1925 Engr. in Chg. of revising street lighting, Venice. TT 2: P 2: RC 2: D 1. TT 6.9: SP 3.9: P 3: RC 3: D 1.5. Refers to H. D. Chapman, E. Z. Collings, B. F. Dupuy, J. B. Griffin, J. K. Scammell.

804 (1) WALSH, JEREMIAH MARK JOHN, 201 W. 3d Ave., Roselle, N. J. (Age 32. Born Roselle, N. J.) 1919 B. S. in C. E., Cooper Union. May to July 1917 Jun. Asst. Engr., Public Service Comm., New York City, Rodman and Transitman, etc. July to Sept. 1917 Topographical Draftsman, City Plan Comm., Newark, N. J., establishing building zones, etc. May to Oct. 1919 Topographical, Structural Steel and Reinforced Concrete Draftsman and Estimator, with McLean Long, C. E., making floor plans and estimating steel in buildings, making topographic map of Newport News, Va., investigating strength of steel columns in proposed alteration, Beaver Bldg., New York City. TT 2.4: SP 2.3: P 0.1: RC 0.1: D 0.1. Oct. 1919 to Feb. 1920 Structural Steel Detailer and Draftsman, Hamilton & Chambers Co., detailing structural steel and making framing plans for mill buildings. TT 0.3: SP 0.3. Feb. to Aug. 1920 Reinforced Concrete and Structural Steel Draftsman, Designer and Estimator, with E. E. Seelye, C. E., New York City, detailing structural steel and reinforced concrete stairs, trusses and beams, making floor framing plans, designing reinforced concrete beams, floors and stairs, estimating weight of steel in buildings. TT 0.5: SP 0.4: P 0.1: RC 0.1: D 0.1. Aug. to Nov. 1920 Structural Steel Draftsman, G. Aus Co., detailing plate girders in first plans for New York County Court House. TT 0.2: SP 0.1: P 0.1: RC 0.1: D 0.1. Nov. 1920 to Feb. 1921 Structural Steel Draftsman, A. E. Norton Co., New York City, detailing structural steel on building alteration. TT 0.2: SP 0.2. March to July 1921 Reinforced Concrete and Topographical Draftsman with James H. Fuertes, C. E., making detailed drawings of filtration plant intake; plotting topographical map of and designing piers and foot bridge on filtration plant site; tracing details of filtration plant chambers; plotting profiles of sewage-disposal system. TT 0.3: SP 0.2: P 0.1: RC 0.1: D 0.1. July 1921 to March 1922 Topographical and Airplane Draftsman, Aerial Transport Corporation, making maps of airplane routes and stations in United States and Europe, service and time schedules, and assembly and detailed drawings of airplanes. TT 0.7: SP 0.3: P 0.4: RC 0.4: D 0.4. March to May 1922 Structural Steel Draftsman with B. G. Goodhue, Archt., making framing plans and structural sections on Nebraska State Capitol. TT 0.2: SP 0.1: P 0.1: RC 0.1: D 0.1. May to Nov. 1922 Structural Steel Draftsman with J. N. Ehrenberg, C. E., detailing structural steel for public schools, columns, built up sections, grillage and beams, making framing plans and sections for detailing and erecting. TT 0.4: SP 0.3: P 0.1: RC 0.1: D 0.1. Nov. 1922 to Feb. 1923 Reinforced Concrete Draftsman, Walter Kidde & Co., detailing reinforced concrete, making floor framing plans, column schedule, architectural floor plans for factory building, flat slab construction, printing press. TT 0.2: SP 0.1: P 0.1: RC 0.1: D 0.1. March to May 1923 Reinforced Concrete Draftsman

and Designer, McClellan & Junkersfeld, Inc., designing and detailing reinforced concrete floor framing for power house; designed ash pit (reinforced concrete) below water level. *TT 0.1: P 0.1: RC 0.1: D 0.1.* May to Oct. 1923 Structural Steel Detailer and Checker, Submarine Boat Corporation; checked trusses and lattice columns and detailed trusses for outdoor substation (galvanized); bracing for bents on pipe lines, columns and beams on theatres and office buildings. *TT 0.4: SP 0.2: P 0.2: RC 0.2: D 0.2.* Dec. 1923 to Feb. 1924 Structural Steel and Reinforced Concrete Draftsman and Designer, Linde Air Products Corporation, designing reinforced concrete footings, columns (steel), framing and floor grating for 3-story building supporting tanks, designed wind bracing (plate brackets), made framing plans and cross-sections and shop details. Feb. to March 1924 Reinforced Concrete Designer, Hudson & Manhattan R. R., designing concrete and reinforced concrete arches for subway; determined line of resistance, thickness and height of arch rings, and line of resistances and stresses in multiple arch. April-May 1924 Reinforced Concrete and Structural Steel Designer, Checker of shop drawings, Electric Bond & Share Co., reinforced concrete and structural steel for power houses, etc. *TT 0.4: SP 0.1: P 0.3: RC 0.3: D 0.3.* Aug. 1924 Reinforced Concrete Draftsman, Moores & Dunford, Inc., detailing reinforced concrete and making structural framing plans for reinforced concrete warehouse, flat slab construction, beam and column schedules, etc. Sept. to Oct. 1924 Reinforced Concrete Draftsman, White Constr. Co., Inc., detailing reinforced concrete columns showing door and window frame recesses and beam and floor heights. Oct. to Nov. 1924 Structural Steel Draftsman, Arny Steel Constr. Co., Elizabeth, N. J., in charge of detailing mill building, checked shop details and framing plans for school building (2 stories), etc. Nov. 1924 to May 1925 Structural Steel Draftsman, McClintic Marshall Constr. Co., New York City, making and checking shop bills, detailed arch ring for Kearny Plant of Western Elec. Co., and columns and grillage on Columbia Univ. Laboratory Bldgs., and sloping portion of roof, Physics Bldg. *TT 0.7: SP 0.5: P 0.2: RC 0.1: D 0.1.* June and July 1925 2d Lieut., F. A., Officers' Reserve Corps Training Camps, Madison Barracks, and Blauvelt, N. Y. *TT 7.1: SP 5.2: P 1.9: RC 1.9: D 1.9.* Refers to B. H. Ackerman, R. W. Atwater, K. Berle, E. B. Day, J. Feld, S. F. Holtzman, H. M. Knight, M. Long, F. Meister, F. H. Nygren, R. A. Pendergrass, E. Praeger, E. E. Seelye, A. L. Stevenson, T. S. Williams.

805 (6) **WALTON, JESSE PUSEY**, 729 Pennsylvania Station, Pittsburgh, Pa. (Age 37. Born Ercildoun, Pa.) 1910 B. S. in C. E., Univ. of Pa. July 1910 to Sept. 1911 Draftsman and Asst. Estimating and Designing Engr., McClintic-Marshall Constr. Co. *TT 3.2: SP 2.8: P 0.4.* Sept. 1911 to June 1919 Draftsman, Office of Engr. of Bridges and Bldgs., Pennsylvania Lines West of Pittsburgh, investigating strength of old bridges, checking stress sheets and details of new bridges. *TT 7.7: P 7.7.* June 1919 to July 1925 Engr., Office of Engr. of Bridges and Bldgs., and July 1925 to date Asst. Engr. of Bridges and Bldgs., Pennsylvania R. R. Co., Pittsburgh, Pa.; supervision, checking stress sheets, and details, design of new bridges and repairs to old bridges. *TT 6.2: P 6.2: RC 6.2: D 1.4. TT 17.1: SP 2.8: P 1.4: RC 6.2: D 1.4.* Refers to J. C. Bland, F. J. Evans, H. R. Leonard, J. F. Leonard, G. L. Taylor.

806 (3) **WEBER, JOSEPH CLARENCE, Jr.**, 996 Exchange St., Rochester, N. Y. (Age 27. Born Rochester, N. Y.) Sept. 1922 to March 1923 Inspector, acting as Rodman and Chainman on subway project, Eng. Dept., Rochester, N. Y. *TT 0.5: SP 0.5.* March to June 1923 Instrumentman for G. R. Newell, Rochester, on surveys, office and drafting room. *TT 0.2: SP 0.2.* July 1923 to March 1924 Instrumentman, Rochester Gas & Elec. Corporation, on surveys and triangulation, charge of party on levels, base line, and topography on dam survey, Mt. Morris, N. Y. *TT 0.7: P 0.7.* April-Aug. 1924 in charge of party, Inspector on sewer and disposal-plant construction for Brighton Sewer Comm. (W. S. Lozier, Cons. Engr.). *TT 0.3: P 0.3.* Sept. to Nov. 1924 Instrumentman, W. R. Storey, Rochester. *TT 0.2: SP 0.2.* Nov. 1924 to May 1925 Jun. Asst. Engr., New York State Dept. of Eng. *TT 0.6: P 0.6.* June 1925 to date Asst. Supt. of Constr., Armstrong Cork & Insulation Co., cooler rooms and cold storage warehouses, in responsible charge of work. *TT 0.1: P 0.1. TT 2.5: SP 0.9: P 1.6.* Refers to N. M. Davidson, W. S. Lozier, E. V. R. Payne, C. A. Poole, P. F. Stephens, J. P. Wells.

807 (1) **WHEADON, ROYTON FRANK**, 162 West 84th St., New York City. (Age 41. Born Johnstown, N. Y.) 1908 B. E. in C. E., Union Coll. April 1905 to Jan. 1906 Rodman with L. B. Sebring, Civ. Engr., Schenectady, N. Y., surveying, inspection of sewers and concrete work, also office work. *TT 2.7: SP 2.7.* Jan. to April 1906 Rodman, under City Engr., Schenectady, on surveys; June to Oct. of years 1906 and 1907 also on work for that City. *TT 0.3: SP 0.3.* June 1908 to Feb. 1910 with H. B. Sproul, Contr., Peekskill, N. Y., as

Contr.'s Engr. on construction of filtration plant and dam for Peekskill; also on construction of waterbound macadam state highway. *TT 1.6: SP 1.1: P 0.5: RC 0.5.* April 1910 to March 1913 Eng. Inspector, Board of Water Supply, New York City, on construction of pressure and grade tunnel cut-and-cover aqueduct and steel pipe syphon; part of time in charge of field party and in office on construction drawings and estimates. *TT 3: SP 2: P 1: RC 1.* March 1913 to Aug. 1917 Jun. Engr., Public Service Comm., 1st Dist., New York, in charge of field party on elevated railroad construction; Asst. Sec. Engr. in charge of office on construction of steel elevated and reinforced concrete viaduct, also elevated railroad stations. *TT 3.4: P 3.4: RC 3.3: D 0.1.* Aug. 1917 to Dec. 1920 and Oct. 1921 to Aug. 1922 Superv. Engr. with Engel and Hevenor, Contrs., on railroad construction, consisting of tracks for Seventh Ave. Subway, New York City, Third Ave. R. R., Delaware, Lackawanna & Western R. R., Port Newark Terminal, U. S. Govt., The Connecticut Co. and various other projects, also estimating new work. *TT 4.1: P 4.1: RC 3.3.* Dec. 1920 to Oct. 1921 Office Engr. with H. P. Hevenor, Cons. Engr., on construction and design of street railway track for City of Detroit, estimating new work, and other work on this project. *TT 0.9: P 0.9: RC 0.4: D 0.5.* Aug. 1922 to June 1924 Track Engr., United Electric Rys., Providence, R. I., on construction and maintenance of tracks, inspection of various conditions, reports and designs in connection with this work. *TT 1.8: P 1.4: D 0.4.* June 1924 to date Draftsman, Port of New York Authority, making preliminary maps and studies for proposed bridges between Staten Island and New Jersey and plans for Inland Freight Terminals. *TT 1: P 1.* *TT 19.5: SP 6.8: P 12.7: RC 8.5: D 1.* Refers to W. J. Boucher, W. R. Dunham, Jr., C. H. Dutton, H. Manley, Jr., H. R. Wickham, A. M. Wyman.

808 (11) WILLIAMS, BEN CHARLES, 736 North Orange Drive, Los Angeles, Cal. (Age 32. Born Sioux City, Iowa.) 1916 A. B., Leland Stanford, Jr., Univ. May to July 1916 Surveyman, U. S. Engr. Dept.; Instrumentman setting forms for concrete in construction of Ft. MacArthur, Cal. *TT 0.1: SP 0.1.* July 1916 to Sept. 1917 with U. S. Reclamation Service, until March 1917 as Hydrographer, maintained rating curve of all canals in South Side Div. of Salt River Project; then Inspector on earthwork contracts, canal construction, Flathead Project; and after May 1917 Jun. Engr., Asst. in supervision of six contracts covering canal construction and concrete irrigation structures; in charge small construction camp building concrete turnouts. *TT 1.2: SP 0.8: P 0.4: RC 0.1.* Sept. 1917 to May 1918 Jun. Engr., U. S. Engr. Dept.; Draftsman and Designer on fortification construction. *TT 0.7: P 0.7: D 0.7.* May 1918 to March 1919 Cadet and Ensign (Engr.), U. S. N. R. F.; graduated from Engr. School at San Pedro and became Instructor in mathematics and steam engineering. *TT 0.8: P 0.8.* March 1919-April 1922 Jun. Engr., U. S. Engr. Dept., in local charge river and harbor work at Yuma, Ariz., and Mono Bay and San Diego, Cal.; local charge fortification construction and maintenance at Ft. Rosecrans, Cal. *TT 3.1: P 3.1: RC 2.3.* May 1922 to July 1923 Asst. Engr. to A. L. Sonderegger, Los Angeles, Cal., on hydrographic surveys, water-supply investigations and general consulting work. *TT 1.2: P 1.2: RC 0.5.* July 1923-Dec. 1924 Asst. Engr. for Sonderegger & Hincks, Cons. Engrs., on hydrographic and land surveys, water-supply studies and general consulting work. *TT 1.5: P 1.5: RC 0.9.* Jan. 1925 to date Asst. Engr. to A. L. Sonderegger, Cons. Engr. and in private practice, on hydrographic surveys and water-supply studies. *TT 0.5: P 0.5: RC 0.4.* *TT 9.1: SP 0.9: P 8.2: RC 4.2: D 0.7.* Refers to H. Conkling, C. M. Cram, H. W. Hincks, D. E. Hughes, C. T. Leeds, A. L. Sonderegger.

809 (4) WILLIAMS, JOHN EMIL, 707 Redwood Ave., Yeadon, Pa. (Age 36. Born Philadelphia, Pa.) Took course in Structural Eng., International Correspondence Schools of Scranton (1912 to 1914) and Franklin Inst. of Technology (Evening School) (1915 to 1917). June 1914 to June 1916 with The Bldrs. Iron Work Co., Philadelphia, Pa., detailing steel for mill and factory buildings, last 6 months Estimator in fabricating shop. *TT 2: SP 1.5: P 0.5: RC 0.5.* June 1916 to Jan. 1919 Structural Draftsman, Wm. Steele & Sons Co., Philadelphia, part of time in surveying squad on outside construction and cost data work. *TT 2.5: SP 1.5: P 1: RC 1: D 1.* Jan. 1919 to Jan. 1921 Structural Engr. and Checker for H. C. Eisenbise, Philadelphia, designing and checking structural steel for mill, office and factory buildings and theatres; latter part of time Squad Boss, and general supervision of an office. *TT 2: P 2: RC 2: D 2.* Jan. 1921 to Jan. 1922 with John Meigs as Engr. designing steel and concrete for river and harbor development; on design and detail of substructure for Tacony-Palmyra Ferry Co. on both sides of river; later Inspector on outside construction on Philadelphia side of Delaware River supervising pile driving and general engineering. *TT 1: P 1: R 0.5: D 0.5.* Jan. to Dec. 1922 with Clarence Wunder, Philadelphia, as Structural Engr. in charge of design of all steelwork; designed Pennsylvania Hotel, Philadelphia, made all computations and supervised and laid out work for draftsmen,

and checked and approved shop details; designed steel, concrete footings and floor system for Pine Manor Apartments and steel and concrete for 13-story addition to Fidelity Storage Warehouse; on last two buildings checked and approved shop details for steel and concrete. *TT 1: P 1: RC 1: D 1.* Dec. 1922 to July 1923 Asst. Chf. Engr., John R. Wiggins Co., supervised design of an apartment house on Long Island and one at 46th and Walnut Sts., Philadelphia (12 stories); made computations for structural steel and concrete floors, footings, retaining walls and concrete piles and supervised and laid out work for draftsmen, and approved shop details. *TT 0.7: P 0.7: RC 0.7: D 0.7.* July 1923 to March 1924 Chf. Engr. with H. E. Kennedy, Philadelphia; designed steel and concrete for Lincoln Drive Apartments, made computations for structural steel concrete footings, floor system and retaining walls; designed steel and concrete for Wm. Penn Hotel (23 stories); also designed 44-story combined hotel and office building; had direct supervision of this work. *TT 0.7: P 0.7: RC 0.7: D 0.7.* April 1924 to April 1925 designed structural steel and reinforced concrete foundations, footings and retaining walls, made reinforcing details, checked shop details for 16-story addition to Medical Arts Bldg., Philadelphia; also commissioned by N. R. Dalton, Archt., to design two apartment houses; also designed two reinforced concrete factory buildings for Stofflett & Tillotson, Contrs. and Bldrs., Philadelphia. At present Asst. Chf. Engr., Hoffman-Henon Co. *TT 1: P 1: RC 1: D 1.* *TT 10.8: SP 3: P 7.8: RC 7.3: D 6.8.* Refers to C. J. Folk, J. Meigs, W. S. Miller, H. M. Stofflett, E. S. Tillotson.

810 (10) WINSLOW, EDWARD LLEWELYN, Jr., 3 Carter Ct., Chapel Hill, N. C. (Age 26. Born Cleveland, Ohio.) 1921 C. E., Univ. of Cinn. Sept. 1916 to May 1920 with New York Central R. R., successively as Blueprint Boy, Computer, Estimator, Rodman, Bridge Inspector and Leveler. *TT 2: SP 2.* May 1920 to Aug. 1922, Draftsman, minor design, Chf. of Party, Asst. Engr., City of Cincinnati. *TT 1.2: P 1.2: RC 0.8.* Aug. 1922 to date Engr., Atwood & Nash, Inc., Archts. and Engrs. *TT 3: P 3: RC 2: D 2.* *TT 6.2: SP 2: P 4.2: RC 2.8: D 2.* Refers to T. C. Atwood, G. M. Braune, H. W. Durham, T. F. Hickerson, F. L. Raschig, T. Saville.

811 (1) WRIGHT, FRANCIS JAMES, Pearl River, N. Y. (Age 29. Born Athens, Pa.) 1919 C. E., Univ. of Cincinnati. July 1915 to July 1919 (2 weeks of each month while student at Univ. of Cinn.) Asst. Engr., Cleveland, Cincinnati, Chicago & St. Louis Ry. and Baltimore & Ohio R. R., on investigation of fill subsidence. *TT 2: SP 2.* July 1919 to July 1922 with Lupfer & Remick as follows: July to Nov. 1919 Asst. Supt. on construction of water-supply system for Newark, N. Y., responsible for materials, cost distribution and quantities; assisting in plant layout and supervision. Dec. 1919 to March 1920 Engr. on reconstruction of locks on Barge Canal at Lockport, responsible for materials, cost distribution and quantities; April to June 1920 Supt. on construction of bridge and highway across Barge Canal, Lyons, N. Y.; July 1920 to July 1922 Engr. on construction of double-leaf bascule bridge, New York City, responsible to contractors for accuracy of all construction work, lines, levels, soundings and construction details. *TT 3.1: SP 0.7: P 2.4: RC 2.4.* Aug. 1922 to June 1925 in private practice at Pearl River, N. Y., covering design and supervision of Dolomite Crushing and Pulverizing Plant, also design and general supervision of improvements to manufacturing plant of Benedict Stone Corporation, Borough Engr. for Montvale, N. J.; inventory and appraisal of New York Edison Plants; on quantities and estimates for local contractors. *TT 2.9: P 2.9: RC 2: D 0.9.* *TT 8: SP 2.7: P 5.3: RC 4.4: D 0.9.* Refers to E. E. Baptiste, G. S. Bennett, W. S. Gefvert, P. H. Glover, W. K. Peasley, T. K. Thomson.

812 (7) YOUNG, HERMAN STONE, 1218 Washtenaw Ave., Ann Arbor, Mich. (Age 23. Born Pawlet, Vt.) 1925 B. S. in Eng., Univ. of Mich. *TT 2: SP 2.* Refers to J. H. Cissel, A. J. Decker, W. C. Hoad, C. T. Johnston, H. W. King, H. E. Riggs, C. O. Wisler.

FOR TRANSFER

FROM THE GRADE OF ASSOCIATE MEMBER

813 (15) BEALL, PENDLETON, Assoc. M., Box 1266, Port Arthur, Tex. (Elected Junior June 6, 1911; Assoc. M. March 14, 1916.) (Age 38. Born Washington, D. C.) 1909 C. E., Rens. Pol. Inst. Sept. 1909 to July 1910 Topographer, Northern Pacific R. R. *TT 2.9: SP 2: P 0.9.* Aug. 1910 to March 1914 with New York Central & Hudson River R. R., 5 months as Concrete Inspector on engine house and auxiliary buildings; 3 months in charge of party sounding Hudson River; 5 months in charge of party making surveys for 4-tracking Hudson Div.; 1 year in charge of construction of two additional tracks, lines, grades and

estimates; entire charge of 10-stall extension engine house, boiler house, R. R. Y. M. C. A. and machine shop (cost \$104 000); 1½ years in charge of Poughkeepsie improvements (reporting to Asst. Dist. Engr.), consisting of two or more new tracks, three overhead bridges, two under-grade crossings, two culverts, revising alignment through city, and necessary street changes; preliminary monthly and final estimates; also coaling and watering station (\$60 000). *TT 3.7: P 3.7: RC 1.3.* March to Oct, 1914 Asst. Engr., Cambria Steel Co., Johnstown, Pa., had charge of all track changes, preliminary design for widening under-grade crossing with Pennsylvania R. R.; design of storm water culvert, narrow-gauge trestle, retaining walls (15 to 30 ft. high), in full charge construction of approaches and erection of 268-ft. span steel highway bridge (total length 514 ft.). *TT 0.6: P 0.6: RC 0.4: D 0.2.* Nov. 1914 to Jan. 1915 Flagman, N. Y. C. & H. R. R. *TT 0.2: SP 0.2.* Jan. to July 1915 Draftsman, Valuation Dept., Cleveland, Cincinnati, Chicago & St. Louis R. R. *TT 0.6: P 0.6.* July 1915 to May 1916 Engr. for D. P. Foley, Contr. on Park Ave. Viaduct, Cincinnati, Ohio (180-ft. reinforced concrete arch with four smaller arches in each approach, cost \$130 000), prepared the working drawings, designed arch centering, made up estimates for bids, and on other work. *TT 0.8: P 0.8: RC 0.8.* May 1916 to Aug. 1917 Engr., The Texas Co., 5 months assisted Constr. Engr., made plant surveys; 10 months Chf. Draftsman, Terminal Div., New York Office, on routine repairs, preliminary design and estimates covering over \$1 000 000 worth of work, ordered material for work in progress. *TT 1.2: P 1.2: D 0.8.* Aug. 1917 to March 1919 with U. S. Army, 165 Inf., 42d Div., Private to 2d Lieut., 16 months in France, 6 months in the lines, 4 months in training and 2 months in Officer School. *TT 1.7: SP 1.3: P 0.4: RC 0.4.* March 1919 to date with The Texas Co., 1½ years Constr. Engr., at Providence, in charge of forces on erection of large 4-story and basement concrete building, two small concrete buildings, three steel buildings, tracks, sewer system and plant maintenance; 1½ years Constr. Engr. at Bayonne, closing out some big construction, final estimates, plant maintenance, developing projects, cost, savings, etc.; 2½ years Chf. Draftsman, Port Arthur Works, handled office end of all construction and maintenance (several million dollars worth of work done), plans, bills, and order of material, preliminary investigation, reports, estimates and design; 2 months Asst. Chf. Engr. on special reports and investigations and part of office work. *TT 6.3: P 6.3: RC 4.3: D 2.2.* *TT 18: SP 3.5: P 14.5: RC 7.2: D 3.2.* Refers to E. R. Cary, R. E. Dougherty, M. Halpern, T. R. Lawson, E. K. Ruth, T. B. Shertzer.

814 (3) BESTOR, ODIN BALTIMORE, Assoc. M., Box 41, Isle Maligne, Que., Canada. (Elected Oct. 9, 1917.) (Age 47. Born Jersey City, N. J.) 1898 A. B. in Mathematical-physical Course, Johns Hopkins Univ. Jan. 1901 to June 1902 Chainman, Rodman, Levelman, Transitman, and Topographer, Coal & Iron R. R. Elkins, W. Va. *TT 1.3: SP 0.8: P 0.7: RC 0.7.* July-Sept. 1902 Instrumentman for E. W. Hess, Clearfield, Pa. *TT 0.2: SP 0.2.* Oct. 1902 to April 1903 Asst. Res. Engr., Louisville & Nashville R. R. Co., Ridge Top, Tenn., in charge of party relocating, cross-sectioning, etc. *TT 0.5: P 0.5: RC 0.5.* April 1903 to April 1904 Instrumentman, L. & N. R. R. *TT 1: SP 0.2: P 0.8: RC 0.8: D 0.2.* April 1904 to July 1905 Asst. Res. Engr., Coal & Coke R. R., Crawford, W. Va., Instrument and inspection work, estimates, etc. *TT 1.3: P 1.3: RC 1: D 0.5.* July 1905 to Nov. 1907 Res. Engr., Carolina, Clinchfield & Ohio Ry., Johnson City, Tenn., heavy construction, with 4 100-ft. tunnel, long concrete arch culverts, etc. *TT 2.3: P 2.3: RC 2.3: D 1.5.* May to Aug. 1908 and Jan. to June 1910 Transitman, Draftsman and Chf. of Party, water-power surveys, Southern Power Co., Toxaway, N. C. *TT 0.7: P 0.7: RC 0.7: D 0.3.* Aug. 1910 to May 1911 Transitman and Chf. of Party, Piedmont & Northern Ry., Charlotte, N. C., preliminary and location surveys. *TT 0.8: SP 0.4: P 0.4: RC 0.4: D 0.4.* Nov. 1911 to Sept. 1913 Res. Engr. and part of time also Supt. British Columbia Elec. Ry. Co., Vancouver, B. C., Canada, surveyed, located and built 8-mile railroad, designed all structures including two Howe truss bridges and pier, and two grade crossings and yards at tidewater, drew up specifications, made estimates, etc. *TT 1.8: P 1.8: RC 1.8: D 1.8.* Nov. 1913 to Feb. 1914 Draftsman, Office of Chf. San. Engr., Maryland State Board of Health, Baltimore, Md., and part of time on surveys. *TT 0.3: SP 0.3.* Feb. to Aug. 1914 in private practice, county and highway surveys; town survey, and sewerage layout, Kings Mountain, N. C., making map of Kings Mountain. *TT 0.5: P 0.5: RC 0.5: D 0.5.* Aug. 1914 to March 1915 Asst. Valuation Engr. for Sanderson & Porter, New York, electric railway valuation. *TT 0.6: P 0.6: RC 0.6: D 0.6.* March 1915 to June 1921 Asst. Field Engr., Valuation of steam railroads, Interstate Commerce Comm., Washington, D. C. *TT 6.2: P 6.2: RC 6.2: D 6.* Aug. to Dec. 1921 Engr. Asst. to Mgr., Dept. of Transportation and Communication, U. S. Chamber of Commerce, Washington, D. C., research studies and reports on steam and electric railway transportation, terminals, highway transport, canals and inland waterways, including Great Lakes, St. Lawrence Seaway, and Marine. *TT 0.4: P 0.4: RC 0.4: D 0.4.* Jan. 1922 to Feb. 1924 Prin. Locating Engr., State Highway Comm., Raleigh, N. C., highway preliminary and loca-

tion surveys, department organization. *TT 2.1: P 2.1: RC 2.1: D 2.1.* 1924 to 1925 Div. Engr., Florida Western & Northern R. R., West Palm Beach, Fla. *TT 1: P 1: RC 1: D 1.* *TT 21.2: SP 1.9: P 19.3: RC 19: D 15.3.* Refers to G. L. Albert, W. H. Mansfield, C. H. Quimby, Jr., J. Reed, C. H. Ruggles, G. F. Syme, C. M. Upham.

815 (12) BLEE, CLARENCE EARL, Assoc. M., British Columbia Elec. Ry. Co., Ltd., Vancouver, B. C., Canada. (Elected December 6, 1915.) (Age 38. Born Santa Ana, Cal.) 1911 B. A. in Eng., Stanford Univ. 1905 to 1910 (summer vacations) Chairman, Rodman, Instrumentman and Draftsman, municipal, railroad and power development work. March 1911 to June 1912 Asst. Engr., Vancouver Island Power Co., Ltd., Victoria, B. C., in charge on construction of hydraulic-fill dam. *TT 3.2: SP 2: P 1.2: RC 1.2.* June 1912 to Jan. 1914 Div. Engr. on construction of Sooke Lake Water Supply for City of Victoria, B. C., in charge of engineering work and later of construction on Intake Div., including concrete dam, headworks, five miles of reinforced concrete conduit, and clearing of reservoir area. *TT 1.6: P 1.6: RC 1.6.* Feb. to May 1914 Chf. of Party on location, Orange County Highway Comm., Santa Ana, Cal. *TT 0.2: P 0.2.* May 1914 to Feb. 1916 Asst. Engr., Panama-Pacific International Exposition, San Francisco, Cal., directly in charge of design and supervision of construction of, and later Supt. of Distribution on, auxiliary water supply system, including installation of wells, pumping plant, five miles of pipe line, etc. *TT 1.8: P 1.8: RC 1.8.* Feb. to May 1916 Eng. Inspector, construction of large reinforced concrete swimming tank, Alameda, Cal. *TT 0.2: P 0.2.* May 1916 to Oct. 1918 Asst. Engr., The California Oregon Power Co., design of details and supervision of placing reinforcement on large reinforced concrete dam, design of reinforced concrete power house, investigation and preliminary reports on power projects. *TT 2.4: P 2.4: RC 2.4.* Nov. 1918 to Sept. 1919 Engr., Benicia Shipbuilding Corporation, in charge of special investigations, including foundation drilling and sinking deep wells. *TT 0.9: P 0.9: RC 0.9.* Sept. 1919 to July 1920 Asst. Prof., Dept. of Civ. Eng., Leland Stanford Junior Univ. *TT 0.8: P 0.8: RC 0.8.* July 1920 to July 1923 Asst. Engr., The California Oregon Power Co., in charge of preparation of plans, specifications and estimates in connection with power projects, transmission lines, and general operation of power system; later Asst. Chf. Engr. *TT 3: P 3: RC 3.* July 1923 to date Prin. Asst. Engr., Constr. Dept., British Columbia Elec. Ry. Co., Ltd., on design, plans, specifications and estimates and supervision of construction on hydro-electric developments. *TT 2: P 2: RC 2: D 2.* *TT 16.1: SP 2: P 14.1: RC 13.9: D 2.* Refers to J. D. Galloway, E. E. Carpenter, C. D. Marx, W. Meredith, C. B. Wing.

816 (2) CARTER, CLARENCE ELMORE, Assoc. M., 14 Beacon St., Boston, Mass. (Elected Oct. 3, 1911.) (Age 42. Born Reading, Mass.) 1906 S. B., Mass. Inst. Tech. 1897 to April 1901 with James A. Bancroft, Reading, Mass., in minor capacities on surveys and town work. April 1901 to Oct. 1902 in charge of party and office work on surveys, street work, buildings and drainage, May to Oct. 1903 on same work and detail plans for electric light conduits, and June to Oct. 1904 Inspector on construction of electric light conduits, all for Raymond C. Allen, Manchester, Mass. *TT 5.8: SP 5.8.* June to Oct. 1905 with John M. Farley, White Plains, N. Y., in charge of field and office work on land subdivision and some sewer and highway work. June 1906 to Nov. 1908 with Oregon Short Line R. R. as Asst. Engr. in charge of resurvey of Nevada & California R. R., laying out depot and bridge steelwork and Salt Lake Terminal and office work. *TT 2.4: P 2.4: RC 1.* Nov. 1908 to Jan. 1912 with Twin Falls North Side Land & Water Co., Jerome, Idaho, until April 1909 designing wooden and masonry structures for canal system and railroad structures, then Res. Engr. on special investigations, extension and repairs of canals, designing masonry and steel structures for storage reservoir; in charge of construction of 15 miles of railroad; design and construction of automatic checkgates, headgate bridges and lifting devices; detailed 300-ft. bridge for Snake River (not built); laying out pumping station and tributary canal system. *TT 3.3: P 3.3: RC 2.8: D 1.5.* March 1912 to July 1918 in private practice at Reading, Mass., on surveys, topography, drainage, sewers, highway and hydraulic. *TT 6.3: P 6.3: RC 5.3: D 4.* July 1918 to April 1920 with Weston & Sampson, Boston, Mass., until Nov. 1919 on design and Res. Engr. on construction of U. S. Housing Corporation Project 59 at Bath, Me., all engineering work, then on water filter repairs. *TT 1.7: P 1.7: RC 1.7: D 0.3.* April 1920 to date with Metcalf & Eddy, Boston, as Asst. Engr. on design of sewers, disposal of mill wastes, valuations, dam design and in charge of construction of dam and pumping station. *TT 5.3: P 5.3: RC 5.5: D 2.* *TT 24.8: SP 5.8: P 19: RC 14.3: D 7.8.* Refers to H. P. Eddy, C. A. Farwell, L. Metcalf, G. A. Sampson, R. S. Weston, G. P. Winn, D. M. Wood.

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817 (3) CULLINGS, EDWIN SANFORD, Assoc. M., 123 Haley St., Watertown, N. Y. (Elected Sept. 3, 1913.) (Age 41. Born Mellette, S. Dak.) 1910 C. E., Syracuse Univ. April 1902 to Nov. 1903 Survey and Office Asst., city engineering work, with Wm. Gifford, Civ. Engr., Schenectady, N. Y. Nov. 1903 to March 1906 Chairman, Rodman, Draftsman and Leveler, New York Central R. R. *TT 6: SP 6.* March to Sept. 1906 and May to Sept. 1907 Instrumentman, City Engr.'s office, Schenectady. June to Sept. 1908 and May to Sept. 1909 Draftsman and Instrumentman, City Engr.'s office, Syracuse, N. Y. June 1910 to Jan. 1920 Leveler and Asst. Engr., New York State; with State Engr. and Surveyor on canal work (over 1 month); with State Water Supply Comm. on investigation of water power resources of State (1 year); and with State Conservation Comm. on investigation of water power resources (5½ years), supervision of minor construction (1 year) and of plans for water-supply systems submitted by cities, towns and villages (2 years); made various reports on water power resources of New York. *TT 5.5: SP 0.5: P 9: RC 7.9: D 1.1.* Jan. 1920 to date Chf. Engr. and Secy., Black River Regulating Dist., Watertown, N. Y., design and construction of storage reservoir for regulation of Black River, Stillwater Reservoir (completed, cost \$1 250 000); preliminary work and design under way for second reservoir in system (to cost about \$3 500 000); also in private practice of hydraulic engineering. *TT 5.5: P 5.5: RC 4: D 1.5.* *TT 21: SP 6.5: P 14.5: RC 11.9: D 2.8.* Refers to W. P. Creager, J. D. Justin, C. H. Locher, E. H. Sargent, R. W. Sherman, R. Suter, F. M. Williams.

818 (4) DUNN, WILLIAM ROBERT, Assoc. M., 200 Pierce St., Easton, Pa. (Elected April 6, 1904.) (Age 65. Born Philadelphia, Pa.) 1887 to 1895 Supt. of Constr. and Mgr. of granulating works for Warren-Ehret Co. of Philadelphia (value of works about \$20 000). Feb. 1895 to date with Vulcanite Portland Cement Co., first as Engr. of design, Supt. of erection and operation of mills for manufacture of Portland cement, at Vulcanite, N. J., including additions to Mill No. 1 (average capacity 1 000 bbl. per day), designing of layout of machinery and buildings and superintendence of installation and construction of Mills Nos. 2 and 3 (average capacity 1 200 bbl. and 2 000 bbl. per day) (total cost of above installation over \$1 000 000); Feb. 1896 to Dec. 1920 Supt., and since Jan. 1921 Works Mgr., in full charge of design and construction at Company's Plants Nos. 1, 2 and 3, at Alpha, N. J. (plants having been increased during this period from 200 bbl. per day to 6 000 bbl. per day; nearly \$3 000 000 expended in constructing these plants). *TT 30.6: P 30.6: RC 30.6: D 30.6.* Refers to C. Dillenbeck, S. H. Harrison, R. L. Humphreys, F. H. Lewis, J. McNeal, H. Struckmann.

819 (2) EDDY, HARRISON PRESCOTT, Jr., Assoc. M., 65 Gray Cliff Rd., Newton Centre, Mass. (Elected Aug. 4, 1924.) (Age 30. Born Worcester, Mass.) 1917 S. B., Mass. Inst. Tech. June 1917 to Feb. 1919 Asst., naval construction, U. S. Naval Reserve Force, 6 months shop practice and administrative instruction, then supervising repairs and new construction of naval and merchant vessels at private shipyards and Navy Yard in Norfolk. *TT 3.7: SP 2: P 1.7: RC 1: D 0.5.* Feb. 1919 to date Asst. Engr. with Metcalf & Eddy, Cons. Engrs., Boston, on investigation, design and construction of sanitary engineering works, among which are: investigations and designs of intercepting sewer systems, Pawtucket and Central Falls, R. I.; sanitary survey, Seekonk River, including tide and stream gaugings, chemical analysis of water and deposits; dam construction, Plattsburgh, N. Y.; streets, sewers, water pipes, sewage-disposal plant construction, Hopedale, Mass.; sewer construction, Lynn, Mass.; analysis of bids for garbage incinerator and reduction plants for Buffalo, N. Y.; writing specifications for equipment for garbage reduction plant and refuse incinerator for Buffalo; investigation for additional water supply for Dayton, Ohio; design of system of sewers and sewage-treatment plant for Valley Falls, R. I.; investigation of sewerage, Detroit, Mich., and part of Greenfield, Mass., and of best method of sewage disposal for Virginia Beach, Va.; Asst. in defense of City Council, Buffalo, in trial before New York Supreme Court. *TT 6.6: SP 1: P 5.6: RC 4.8: D 5.4.* *TT 10.3: SP 3: P 7.3: RC 5.8: D 5.9.* Refers to G. A. Carpenter, F. M. Gunby, L. Metcalf, C. M. Spofford, R. S. Weston.

820 (1) JENNY, LOUIS ALFRED, Assoc. M., 128 E. Madison Ave., Dumont, N. J. (Elected Oct. 14, 1919.) (Age 39. Born Wimmis, Switzerland.) 1905 to 1906 Draftsman, Western Elec. Co., New York. *TT 0.8: SP 0.8.* 1906 to 1917 with New York Central R. R., New York City, 7 years as Draftsman and Designer on structures, yard design and special track-work, and 4 years Asst. Engr., in charge of permanent track work, Grand Central Terminal, New York City (2 years) and of planning new passenger and freight terminal facilities at Buffalo (2 years). *TT 11: SP 2: P 9: RC 4.* 1917 to 1919 Capt. and Major, Transportation Corps, U. S. Army: Designing Engr. in charge of planning all port and railroad facilities for American Army in France, and later in charge of reconstruction of railroads, Verdun to

Sedan and Verdun to Conflans. *TT 1.8: P 1.8: RC 1.8.* 1919 to 1920 Res. Engr., U. S. Shipping Board, New York, in charge of dry dock construction. *TT 0.8: P 0.8: RC 0.8.* 1920 to 1921 with Todd Robertson Todd Eng. Corporation, New York City, as Asst.-Engr. in Chg., Cunard Marine Terminal, Weehawken, N. J., large pier and railroad terminal project. *TT 1.5: P 1.5: RC 1.5.* 1921 to 1922 with Board of Economics and Eng., New York, studies and plans for consolidating railroad terminal facilities at Chicago. *TT 0.9: P 0.9: RC 0.9.* 1922 with Arthur McMullen Co., New York City, designed reinforced concrete caissons for Castleton Bridge (N. Y. C. R. R. over Hudson River below Albany), also coffer dams. *TT 0.8: P 0.8: RC 0.8.* 1922 to 1924 Engr., Henry C. Irons & Sons, New York City, on large housing project for Metropolitan Life Insurance Co., at Long Island City. *TT 1.3: P 1.3: RC 1.3.* 1924 to date with W. J. Wilgus, New York City, as Locating Engr. on railroad relocation and Valuation Engr. making valuation of Fonda, Johnstown & Gloversville R. R. at Gloversville, N. Y. *TT 1.2: P 1.2: RC 1.2.* *TT 19.6: SP 2.8: P 16.8: RC 11.8.* Refers to W. W. Atterbury, J. P. Hallihan, G. A. Harwood, F. Molitor, F. S. Senior, H. M. Waite, W. J. Wilgus.

821 (11) KEAYS, REGINALD HORTON, Assoc. M., 1731 Arapahoe St., Denver, Colo. (Elected Junior June 6, 1899; Assoc. M., April 3, 1901.) (Age 51. Born Sarnia, Canada.) 1895 C. E., Cornell Univ. 1895 (about 4 months) Topographer, Adirondack State Survey. *TT 2.3.* 1895 to 1896 Instructor in Civ. Eng., Cornell Univ. 1896 (about 3 months) Transitman on surveys for hydraulic laboratory, Cornell University. 1896 Graduate student, Cornell Univ. *TT 1.3: RC 0.8.* 1897 Asst. Engr., Public Improvement Comm., Cohoes, N. Y., sewer design. *TT 0.5.* 1897 to 1898 Recorder, U. S. Deep Waterways Survey. *TT 0.9.* 1898 to 1899 with U. S. Army, Spanish-American War, Porto Rico campaign. *TT 0.6.* 1899 to 1902 Asst. Engr., Dept. of Havana, Cuba, surveys for Water Dept., and surveys and design of sewer system for Havana. *TT 3.3: RC 3.3: D 2.* 1902 to 1903 Engr., Farrell & Hopper, Contrs. for Central Park tunnel, New York Rapid Transit Subway. *TT 1: RC 1.* 1903 Res. Engr., Dept. of Bridges, Illinois Central R. R., Cairo, Ill., surveys for improvements of Cairo Bridge and approaches. 1903 Asst. Engr., Hudson Imp. Co., surveys, Hudson Tubes. *TT 0.3.* 1904 to 1907 with Hudson Companies, until 1905 as Inspector in charge concrete lining of Hudson tunnels, then Works Mgr., Jersey City, N. J., in charge tunnel construction. *TT 3: RC 3.* 1907 to 1909 Office Engr., 1909 to 1914 Asst. Engr., on surveys estimates and designs for contractor's plant, Wallkill Tunnel, and 1919 to 1920 Engr. in Chg., construction of Shandaken tunnel, all for Degnon Contracting Co. *TT 8.3: RC 8.3: D 1.* 1914 to 1919 Chf. Engr., New York and New Jersey Constr. Co., in charge of construction of contracts Nos. 3 and 17, Passaic Valley Sewer, grading Avenue R., Newark, Morris Park Ave. Sewer, Bronx, N. Y., preparation of estimates and bids on other work. *TT 5: RC 5.* 1920 to 1923 Asst. Gen. Supt., Ulen Constr. Corporation, construction Shandaken tunnel. *TT 2.5: RC 2.5.* 1923 to 1925 Chf. Engr., Moffat Tunnel Comm., Denver, Colo. *TT 2.1: RC 2.* *TT 31.5: RC 26.4: D 3.* Refers to W. J. Barden, N. G. Degnon, R. Ridgway, H. C. Sanford, T. S. Shepperd.

822 (15) LANPHIER, EDWARD STABLER, Assoc. M., Room 224 Customhouse Bldg., New Orleans, La. (Elected March 12, 1923.) (Age 52. Born New Orleans, La.) Sept. 1912 to date with U. S. Lighthouse Service, as follows: Sept. 1912 to Oct. 1914 Asst. Supt., 8th Dist. (St. Marks, Fla. to Rio Grande, Tex.), supervision of construction work, lighthouse structures, consisting of aids from which lights are shown, dwelling, wharves, etc., preparation of plans and specifications for small boats or power launches and for repair of steam vessels; Oct. 1914 to June 1918 Supt. (Lighthouse Engr.) and June 1918 to June 1919 First Asst. Supt. (title changed from Supt. by act of Congress), on same work with increased responsibilities as to design and responsible charge; responsible for initiative in preparation of plans; July 1919 to date Supt. of Lighthouses, 8th Dist., in responsible charge of supervision and direction of engineering work, including design, plan and constructing of lighthouses, wharves, storehouses, dwellings and appurtenant structures, also installation and repair of machinery on vessels and shore stations, construction and repair of vessels (expenditure for 1924 \$601 516). *TT 12.8: P 12.8: RC 10.7: D 6.* Refers to H. B. Bowerman, E. S. Bres, J. S. Conway, E. J. Dent, M. Garsaud, W. B. Gregory, F. A. Muth, H. W. Rhodes, R. R. Tinkham, S. M. Young.

823 (12) POLLOCK, CARL DeFORREST, Assoc. M., 1628 North 53d St., Seattle, Wash. (Elected March 12, 1923.) (Age 39. Born Greeley, Colo.) 1911 B. S. in C. E., Univ. of Wash. June 1906 to Sept. 1907 Chainman and Leveler, and June 1911 to June 1912 Computer, City of Seattle, Wash. *TT 4.2: SP 3.2: P 1.* June 1908 to Sept. 1910 (vacations) Chainman, Levelman and Transitman for J. Thomas Dovy and Eng. Dept., Seattle, Wash. June 1912 to Nov. 1914 with Prince Rupert Hydro-Elec. Co., until Aug. 1913 as Draftsman

on design of water and sewer systems, dock, dam, office building, etc.; then Supt. of Constr. in charge of building part of this work and power house. *TT 2.5: P 2.5: RC 1.3: D 1.6.* Jan. to June 1915 drafting on harbor work and Jan. to April 1925 design of headwork for power canal with R. H. Thomson, Seattle. *TT 0.8: P 0.8: D 0.3.* June 1915 to May 1916 Draftsman for J. D. Blackwell, drafting design, computing and estimating for court work on water systems, railroads, canals, heating, etc. *TT 0.9: P 0.9: D 0.2.* May 1916 to Jan. 1924 with Alaskan Eng. Comm. as follows: May 1916 to June 1917 Res. Engr. in charge of design and construction of heating plants and systems; June 1917 to March 1921 Water Service Engr. for Alaska R. R., designed, installed and maintained water, heating and sewer systems for 500 miles of railroad, three towns and three terminals; March 1921 to June 1922 Supt. of Constr. on design and construction of two steam power plants, two water systems, a sewer system, central heating system and construction of hotel, office, hospital, residences and \$400 000 coal-washing plant including design of washery building details; June 1922 to Jan. 1924 Office Engr. in charge of drafting room and all designs for Alaska Railroad, except bridges. Jan. to Nov. 1924 Bridge Engr., Alaska R. R. (formerly Alaskan Eng. Comm.), in charge of office engineering, including bridge work and general supervision of bridge field work. *TT 8.3: P 8.3: RC 8.3: D 4.8.* May 1925 to date Office Engr. for W. C. Morse, Hydr. Engr., design and general supervision of field work on water systems and filtration plants. *TT 6.3: P 0.3: RC 0.3: D 0.3.* *TT 17: SP 3.2: P 13.8: RC 9.9: D 7.2.* Refers to W. Gerig, J. C. Gotwals, F. Mears, W. C. Morse, J. C. Steese, R. H. Thomson, H. P. Warren.

824 (9) POSEY, MASON ELI SAUNDERS, Assoc. M., Box 369, Frankfort, Ky. (Elected July 11, 1921.) (Age 37. Born London, Ky.) Feb. 1906 to Dec. 1910 Rodman, Chairman and Instrumentman, and April 1912 to March 1914 Res. Engr., in charge of construction of 12 miles, Louisville & Nashville R. R. Co. *TT 6.8: P 6.8: RC 1.9.* Dec. 1910 to April 1912 Transitman and Topographer, Tuscaloosa Mineral R. R. Co., and March 1914 to March 1915 Locating Engr., in complete charge of locating 40 miles, North Georgia Mineral R. R. (subsidiaries of L. & N. R. R. Co.). *TT 2.3: P 2.3: RC 2.3.* March 1915 to May 1917 Chf. Engr., Cumberland & Manchester R. R. Co., locating, designing, and constructing 25 miles. *TT 2.2: P 2.2: RC 2.2.* Aug. 1917 to Nov. 1919 Chf. Engr., Black Mountain R. R. Co. and Harlan Coal Co. in complete charge of locating and building 9 miles of railroad and developing 3 500 acres of coal land, building mining camp, tipples, spurs, driving entries. *TT 2.2: P 2.2: RC 2.2.* Nov. 1919 to July 1920 Locating Engr. and Chf. Locating Engr., July 1920 to Feb. 1923 Div. Engr. in charge of all location and construction in nineteen counties, and Aug. 1923 to May 1924 Locating Engr., Kentucky State Highway Dept. *TT 4: P 4: RC 4.* Feb. to Aug. 1923 Pres. and Gen. Mgr. in charge of installation, Ashland Limestone Co., constructing crushing plant, railroad tracks, tram roads, opening quarry, building camp (cost \$200 000). *TT 0.4: P 0.4: RC 0.4.* May 1924 to date Executive Secy., Kentucky State Highway Comm., making confidential reports for Governor. *TT 1.2: P 1.2: RC 1.2.* *TT 19.3: P 19.2: RC 14.2.* Refers to W. A. Brownfield, H. Cook, C. P. Fortney, J. F. Grimes, R. R. Payne, D. V. Terrell, E. N. Todd.

825 (8) RICHARDSON, GEORGE BIBLE, Assoc. M., 525 South Bench St., Galena, Ill. (Elected Nov. 26, 1916.) (Age 36. Born Bandon, Ireland.) 1921 B. S. in C. E., Univ. of Wash., Seattle, Wash. 1905 to 1908 Indentured pupil and 1908 to 1909 Asst. Engr. with G. A. E. Hickson, Civ. Engr., Tralee, Ireland. *TT 6: SP 6.* April to Aug. 1909 Architectural Draftsman in office of R. T. Knipe, Seattle, Wash. *TT 0.3: SP 0.3: D 0.3.* Aug. to Dec. 1909 Chainman, L. M. Rice & Co., Seattle. *TT 0.3: SP 0.3.* Jan. to March 1910 Topographical Rodman to Recorder, U. S. Army Engrs., Seattle Dist. *TT 0.2: SP 0.2.* April to Sept. 1910 Rodman, W. V. & N. Ry. *TT 0.4: SP 0.4.* Sept. 1910 to June 1911 student, Eng. School, Univ. of Washington. June to Dec. 1911 Leveler, Great Northern Ry. *TT 0.5: SP 0.5.* Jan. 1912 to Feb. 1914 with Chicago, Milwaukee & St. Paul Ry. in Montana, as Topographer to Instrumentman, and (1½ years) Res. Engr. on construction. *TT 2.1: P 2.1: RC 1.3: D 1.3.* June 1914 to June 1918 with Alaska Eng. Comm., as Levelman (about 1 month) and Asst. Engr. (19/10 years) on railroad surveys, and 2 years Res. Engr. on railroad construction. *TT 4: SP 0.1: P 3.9: RC 3.9: D 2.* June to Dec. 1918 Locating Engr., Siema, Carey-H. S. Kerbaugh Corporation, on Olympic Peninsula, Washington, locating logging railroads. *TT 0.5: P 0.5: RC 0.5.* Jan. 1919 to March 1921 student, Eng. School, Univ. of Washington. June to Oct. 1920 with Stone & Webster Eng. Corporation as Chf. of field parties on preliminary investigation of proposed power project in Cascade Mts., Washington. June 1921 to April 1922 with Oregon Highway Comm., Salem, Ore., checking and passing on final estimates of Res. Engrs. *TT 0.8: P 0.8: RC 0.8.* April to Aug. 1922 with Indiana State Highway Dept. as Project Engr. in charge of grading, bridge and paving on section of Lincoln Highway. *TT 0.3: P 0.3:*

RC 0.3: D 0.3. Aug. 1922 to date with Bureau of Public Works and Bldgs., Div. of Highways, Illinois, until March 1923 as Jun. Highway Engr. to Asst. Highway Engr., then Res. Engr. on construction, and since March 1924 Div. Engr. having supervision over an average of 85 miles of construction, including heavy grading, reinforced concrete and steel bridges and concrete paving. **TT 3: P 3: RC 2.4: D 3. TT 18.4: SP 7.8: P 10.6: RC 9.2: D 7.9.** Refers to W. F. Allison, F. D. Hayden, A. A. Northrop, J. C. Rathbun, T. Riggs, W. D. Shannon.

826 (1) SIELKE, ALBERT VICTOR, Assoc. M., 1466 Rosedale Ave., New York City. (Elected Junior Oct. 11, 1920; Assoc. M., May 8, 1922.) (Age 31. Born Mt. Vernon, N. Y.) 1913 took special course in Civ. Eng., Columbia Univ. 1910 to 1912 Draftsman and later Engr., with Wm. H. McElfatrick, Archt., New York City; designed theatres and other structures, including all kinds of foundations cantilevers, trusses, etc. **TT 2: SP 2. 1912 to 1914 Engr., U. S. Realty & Improvement Co., New York City, designing, computing, surveying and superintending structures in connection with Dual Subway System. TT 2: SP 2. 1914 to 1917 Engr., Degnon Contr. Co. and subsidiary companies, New York City; design of structures necessitated by Dual Subway System, including overhead suspension catenaries, telfers, underpinning all types of structures, etc.; structural design of industrial and commercial buildings; design of piers, bulkheads, floatbridges, etc.; railroad and trackwork computations in connection with Degnon R. R. Terminal, Long Island City, general civil engineering in connection with miscellaneous structures, improvements to large tracts of land, sanitation problems, etc. TT 3: SP 1.5: P 1.5: RC 1.5: D 1.5. 1917 to 1918 Reinforced Concrete Engr., Turner Constr. Co., New York City, designing and preparing plans for concrete structures, including Brighton Baths, Brighton Beach, N. Y., National Biscuit Co. stables and garage, Pittsburgh, Pa., etc. TT 1: P 1: RC 0.5: D 0.5. 1918 to 1921 Chf. Draftsman and Designing Engr., Nugent Constr. Corporation, New York City, preparing plans and designing reinforced concrete and structural steel structures, including S. S. White Bldg., Philadelphia, United Cigar Store Bldg., Whitehall Street, New York City, large retaining walls for Overbrook Hospital, Essex County, N. J., supervision of work on Nurses' Home, Kings County Hospital, New York City, etc. TT 2.5: P 2.5: RC 1.5: D 1. 1921 to date Engr. for Chas. L. Craig, Comptroller, Dept. of Finance, New York City, designing, preparing plans, drawings, preliminary costs, etc., on confidential work, including structural design of buildings, subway sections, investigation of underpinning, etc.; prepared preliminary studies of Riverside Park Improvement from 72d to 129th St. TT 4.5: P 4.5: RC 2: D 2.5. TT 15: SP 5.5: P 9.5: RC 5.5: D 5.5. Refers to W. B. Claflin, J. O. Eckersley, F. D. Fisher, R. P. Gustin, A. C. Kaestner, C. H. Stengel, A. A. Stuart.**

FROM THE GRADE OF AFFILIATE

827 (1) DURBIN, HARVEY RANDOLPH, Affiliate, Care, International Cement Corporation, 342 Madison Ave., New York City. (Elected Jan. 14, 1924.) (Age 46. Born Bethany, Ohio.) 1902 B. S., Case School of Applied Sci. Aug. 1902-Nov. 1908 with Sandusky (Ohio) Portland Cement Co., until April 1906 as Chemist at Bay Bridge Plant, then Asst. Supt. and Chemist at Dixon, Ill. **TT 7.3: SP 5.7: P 1.6. Dec. 1908 to Sept. 1909 Chf. Chemist, Bonner Portland Cement Co., Kansas City, Mo. TT 0.8: P 0.8: RC 0.8. Oct. 1909 to date Chf. Chemist, Texas Portland Cement Co., Dallas, Tex.; also (since its organization about 6 years ago) with International Cement Corporation, New York City, as Chf. or Superv. Chemist in responsible charge of all chemical work, including research; surveyed and reported on and recommended purchase of properties valued at over \$5 000 000. TT 15.8: P 15.8: RC 15.8. TT 23.9: SP 5.7: P 18.2: RC 16.6. Refers to J. H. Brillhart, C. A. Clark, R. L. Holmes, J. M. Howe, O. H. Koch, E. N. Noyes, W. J. Powell.**

FROM THE GRADE OF JUNIOR

828 (9) BONNEY, ORRIS, Jun., 60 Jason Ave., Columbus, Ohio. (Elected Feb. 25, 1924.) (Age 29. Born Grand Rapids, Mich.) 1918 B. S. in C. E., Univ. of Mich. March 1919 to May 1923 in City Engr.'s office, Sewer Dept., Detroit, Mich. until June 1921 as Draftsman preparing plans for lateral and public sewers; then Senior Asst. Engr., Prin. Asst. in charge of Public Sewer Dept., preparing plans for sewers, pumping stations, etc., making cost estimates, writing specifications. **TT 6.2: SP 4.3: P 1.9: RC 1.9: D 1.9. May 1923 to date in office of Chf. Engr., Dept. of Public Service, Columbus, Ohio, until Aug. 1924 as Engr. in Chg., sewer investigation and study for the city, making studies, preparing plans and estimates preliminary to submitting \$3 500 000 bond issue to voters for new and relief sewers, determining rates of sewage flow, development of rainfall intensity curves for Columbus, determination of area to be taken care of, etc.; since then Engr. in Chg. of sewer design and construction, in charge of all plans, specifications, etc., and in charge of construction of sewers and storm drains in city (value of work constructed since Aug. 1924 amounts to**

\$425 000). TT 2.3: P 2.3: RC 2.3: D 2.3. TT 3.5: SP 4.3: P 4.2: RC 4.2: D 4.2. Refers to E. G. Bradbury, J. H. Gregory, J. R. Hendry, C. W. Hubbell, W. D. McFarlane, J. C. Prior, J. W. Reid, M. F. Wagnitz.

829 (6) CUMMINGS, ROBERT AUGUSTUS, Jr., Jun., 5911 Elgin Ave., Pittsburgh, Pa. (Elected Sept. 11, 1917.) (Age 31. Born Philadelphia, Pa.) 1916 Ph. B., Sheffield Sci. School. June and July 1914 with Cummings Structural Concrete Co., Pittsburgh, Pa., collecting and preparing cost data of 216-ft. span reinforced concrete bridge across Haights Run, Pittsburgh, and similar contracts. Aug. 1914 Transitman, and June and July 1915 on studies of mineralogy and specific gravity, soil particles, lateral pressures, etc., with R. A. Cummings, Pittsburgh. TT 0.5: SP 0.5. July 1916 to Dec. 1917 Asst. Engr. in design and later Res. Engr. in charge, Cummings Structural Concrete Co., on construction of mill for Scott Paper Co., Chester, Pa. TT 1.5: P 1.5: RC 1.3: D 0.2. Jan. to Dec. 1918 Engr. designing concrete ship frames and other parts of concrete ships and tankers, Concrete Ship Div., U. S. Shipping Board. TT 1: P 1: D 1. Jan. to May 1919 Engr. in charge shipyard in constructing four concrete barges for U. S. R. R., Administration at Ithaca, N. Y.; had sole charge of building and launching two concrete barges of 550-ton capacity. TT 0.4: P 0.4: RC 0.4. June to Oct. 1919 Assayer of clay and shale deposits in Hudson River Valley. TT 0.4: P 0.4. Nov. 1919 to Oct. 1924 with Electric Welding Co., Pittsburgh, as Secy.-Treas. and Engr. for design of miscellaneous concrete structures and steel reinforcement details; also in charge of operations at works, McKees Rocks, Pa. TT 5: P 5: RC 4: D 1. Nov. 1924 to date Engr. with R. A. Cummings on location, preparing estimates of cost of construction and financial prospects, etc., of Bermuda Ry. and later abroad financing for construction. TT 0.8: P 0.8. TT 9.6: SP 0.5: P 9.1: RC 5.7: D 2.2. Refers to R. A. Cummings, S. C. Hollister, E. N. Hunting, G. H. Neilson, A. R. Raymer, B. Wilson.

830 (1) DAVILA, JORGE VICTOR, Jun., Dept. of Health, San Juan, Porto Rico. (Elected Jan. 14, 1924.) (Age 25. Born Bayamon, Porto Rico.) 1921 B. S., Mass. Inst. Tech. July 1921 to Sept. 1923 with Isabela Irrigation Service, Dept. of the Interior, Porto Rico, until May 1922 as Transitman, then Asst. Engr. on design of reinforced concrete structures, Chf. of party in survey of catch basin of Guajataca River, location of Guajataca Dam and appurtenant structures, survey and location of 9 km. of road, and on estimates of cost. TT 4.1: SP 3.4: P 0.7. Sept. 1923 to date with Dept. of Health, Porto Rico, until June 1924 as Asst. San. Engr., revision of plans for construction of buildings in Porto Rico, investigation of sources of water supply and passing on types of purification plant and plans for sewer and sewage-disposal plant; in charge of Bureau of San. Eng. in absence of San. Engr.; since June 1924 Engr. on same work, having charge of inspection of municipal work; has general supervision as to sanitary work over all public works, such as sewers, water-works and public buildings. TT 1.9: P 1.9: RC 1.7. TT 6: SP 3.4: P 2.6: RC 1.7. Refers to J. A. Canals, M. Font, F. Levy Gonzalez, R. Ramirez, E. Totti y Torres, C. del Valle Zeno.

831 (11) DOWD, MUNSON JULIUS, Jun., Care, Imperial Irrigation Dist., Calexico, Cal. (Elected Jan. 13, 1919.) (Age 29. Born Malden, Mass.) 1918 B. S. in Civ. Eng., Cal. Inst. Tech. June to Sept. 1913 Electrician's Helper, rewiring 60-in. telescope on Mt. Wilson, June to Sept. 1914 Helper, reinforced concrete construction of heavy foundations and buildings, June to Sept. 1915 Erector, Holder-on and Riveter, erection of structural steel buildings, and June to Sept. 1916 Machinist's Helper, erection of 100-in. telescope on Mt. Wilson, all for Mt. Wilson Observatory. June to Sept. 1917 Chainman and Draftsman, Southern California Edison Co., transmission line surveys and maps. TT 2.5: SP 2.5. May 1918 to Feb. 1919 with Southwestern Shipbuilding Co., various work on steel ship construction. TT 0.8: SP 0.8. March-Nov. 1919 Jun. Engr., U. S. Reclamation Service, Yakima Project on hydrometry, drafting, surveys, Sunnyside Div., and Dec. 1919-June 1922 Maintenance Engr. in charge office and field engineering, hydrometry and water records. TT 3.3: P 3.3: RC 2.6: D 1.5. July 1922 to date with Imperial Irrigation Dist., until March 1925 as Watermaster in charge of operation of main canals in United States and Mexico, and to users in Mexico and Calexico Div.; since April 1925 Gen. Watermaster, complete charge of canal system in Mexico, General Water Office, United States, and entire telephone system. TT 3: P 3: RC 3: D 0.5. TT 9.7: SP 3.3: P 6.3: RC 5.6: D 2. Refers to R. S. Carberry, J. G. Heinz, J. L. Lytel, F. D. Pyle, S. L. Rothery, H. M. Rouse, F. W. Slattery.

832 (15) EVANS, HENRY MOORE, Jun., 312 Morgan Bldg., Wichita Falls, Tex. (Elected Nov. 26, 1923.) (Age 28. Born Granbury, Tex.) Sept. 1913 to June 1916 Chainman and Rodman, Ft. Worth & Denver R. R. TT 2.7: SP 2.7. June 1916 to Jan. 1917 Transit-

man, Woods Constr. Co. TT 0.5: SP 0.5. Jan. to June 1917 Transitman, J. W. Utley Constr. Co. TT 0.5: SP 0.5. June 1917 to Jan. 1918 Draftsman, Ft. Worth Stock Yards Co. TT 0.5: SP 0.5. Jan. to Aug. 1918 and Dec. 1918 to Nov. 1919 Draftsman, Swift & Co. TT 1.6: SP 1.6. Aug. to Dec. 1918 at Officers' Training School, Nov. 1919 to Aug. 1920 Draftsman, Acme Brick Co. TT 0.7: SP 0.7. Aug. 1920 to Feb. 1921 Draftsman and Transitman, Frisco R. R. TT 0.4: SP 0.4. Feb. to Oct. 1921 Track Supt., Wichita Falls & Southern R. R. TT 0.7: SP 0.7. Oct. to Dec. 1921 Draftsman and Topographer, with H. F. McFarland. TT 0.2: SP 0.2. Dec. 1921 to Feb. 1923 Concrete Designer and Checker, Wichita County Irrigation Dist. No. 1. TT 1.2: P 1.2: D 1.2. Feb. 1923 to date Engr., with Voelcker & Dixon, Archts., executing engineering design and superintending construction. TT 2.5: P 2.5: RC 2.5: D 2.5. TT 11.5: SP 7.8: P 3.7: RC 2.5: D 3.7. Refers to O. N. Floyd, H. B. Freidman, J. L. Locheridge, H. F. McFarland, J. F. J. McGehearty, J. Montgomery, R. A. Thompson, J. E. Ward, P. A. Welty.

833 (1) KOSTING, FREDERICK WILLIAM, Jun., 550 West 170th St., New York City. (Elected May 19, 1924.) (Age 25. Born Edinburgh, Scotland.) 1920 B. S., Cooper Union Inst. Tech. May 1920 to April 1921 Detailer of reinforced concrete structures, Corrugated Bar Co., New York City. TT 2.9: SP 2.7: P 0.2: RC 0.2. June 1921 to March 1922 Draftsman, Philadelphia Co., Pittsburgh, Pa., making large scale map of greater Pittsburgh. TT 0.8: P 0.8: RC 0.8. March 1922 to March 1924 Sales Engr., Corrugated Bar Co., also designing and estimating reinforced concrete structures. TT 2: P 2: RC 2: D 0.9. May 1924 to date Sales Engr., McClintic-Marshall Co., New York City, in Concrete Dept., designing and estimating, closing lump sum contracts, general sales and office work. TT 1.1: P 1.1: RC 1.1: D 1.1. TT 6.8: SP 2.7: P 4.1: RC 4.1: D 2. Refers to J. F. Jung, B. J. Mansfield, G. Morrison, J. B. Smiley, K. C. Spayde.

834 (10) McMANUS, EUGENE JOSEPH, Jun., Box 277, Tryon, N. C. (Elected May 19, 1924.) (Age 27. Born Charleston, S. C.) Licensed Civ. Engr., North Carolina. 1919 B. S., The Citadel (The Mil. Coll. of S. C.). June to Oct. 1919 Rodman, Transitman, Chf. of Party, San. and Drainage Comm., Charleston, on location, inspection, construction, supervision, roads and pavements with bridges in Charleston County. TT 0.4: P 0.4. Oct. 1919 to April 1920 Inspector and Asst. Res. Engr., South Carolina State Highway Comm., concrete and Belgian block pavement, A. C. L. overhead viaduct near Charleston. TT 0.5: P 0.5. April 1920 to July 1921 Res. Engr., same Commission, Columbia; Acting County Engr., Florence County, S. C., on construction of 10 miles concrete pavement and 10 miles sand clay road with bridges. TT 1: P 1: RC 1. July 1921 to Feb. 1925 Res. Engr., North Carolina State Highway Comm., Raleigh, on 40 miles mountain location and construction of 25 miles macadam surface treated and fifty bridges and culverts. TT 3.6: P 3.6: RC 3.6. Feb. 1925 to date Chf. Field Engr., Lake Lanier Development, Tryon, N. C., supervision and design of 15 miles roads and streets, construction of concrete arch dam (65 ft. high by 250 ft.), entire charge of engineering work on 800 acres of sub-division. TT 0.4: P 0.4: RC 0.4: D 0.4. TT 6: P 6: RC 4.6: D 0.4. Refers to C. N. Conner, H. E. Howes, G. T. MacNab, J. W. Martin, W. M. Peyton, P. K. Schuyler, C. M. Upham.

835 (1) MEYER, HARRY HELMUTH, Jun., 73 Ossining Rd., Pleasantville, N. Y. (Elected Jan. 17, 1921.) (Age 30. Born New York City.) 1917 B. S., and 1920 C. E., Columbia Univ. Previous to 1919 Computer, Rodman, Field Observer and other miscellaneous work. TT 2.6: SP 2.6. July to Dec. 1919 Structural Steel Designer and Detailer for Prof. S. O. Miller, Cons. Engr., New York City, work involving design of steel for Bankers Trust Co. Bldg., and major portion of heaviest steel for Cunard Bldg. TT 0.6: P 0.6: RC 0.3: D 0.3. 1920 to 1922 Senior Draftsman, Jun. Engr., Designer, etc., New York Central R. R., mostly structural designing in steel, concrete and timber for all kinds of railroad structures and buildings. TT 2.4: P 2.4: RC 1.2: D 1.2. 1922 to date Asst. Engr. (designing), Sanderson & Porter, New York City, mostly structural designing and estimating for power houses, substations, transmission lines and office buildings, etc. TT 2.8: P 2.8: RC 2.8. TT 8.4: SP 2.6: P 5.8: RC 4.3: D 1.5. Refers to F. Blossom, J. S. Branne, R. W. Briggs, R. E. Dougherty, E. B. Lovell, S. O. Miller.

836 (1) SCHWARTZ, JACOB DAVID, Jan., 35 Herzl St., Brooklyn, N. Y. (Elected Jan. 15, 1923.) (Age 31. Born Yassy, Rumania.) 1918 C. E., Pol. Inst. of Brooklyn, June 1918 to Aug. 1920 Draftsman with Asst. (Production) Gen. Mgr., Chf. of Production Dept., Sun Shipbuilding Co., Chester, Pa.; outlined schedules for shop operations, made erection schedules for hulls, planned berthing system for steel hulls. TT 4.2: SP 4.5: P 1.7: RC 1.7. Sept. 1920 to May 1922 Civ. Eng. Draftsman on design of subway, Transit Comm., New York

City; assisted on design of fan chamber and subway station at 41st St. and 7th Ave., Queensboro Extension Subway, and of Fourteenth St. Subway passageway. *TT 1.6: SP 0.6: P 1: D 1.* May 1922 to Jan. 1923 Topographical Draftsman, Dept. of Water Supply, High Bridge reconstruction; in charge of boring (night shift, July and Aug. 1922); investigated stresses in arch bridge and stability of masonry piers; assisted in design of reinforced concrete arch to replace three arches and designed new pier. *TT 0.7: SP 0.1: P 0.6: RC 0.2: D 0.5.* Jan. 1923 to May 1925 Structural Steel Draftsman, Board of Estimate, Office of Chf. Engr.; investigated stresses in tremie concrete of Narrows tunnel and drew up sections for same; about 1 year with Real Estate Div., computed for acquisition of property. *TT 2.3: SP 1.3: P 1: RC 0.5: D 0.5.* May 1925 to date Topographical Draftsman, Pres., Borough of Queens, Long Island City, with Highway Dept.; made profile and plan of work, also estimates of quantities and cost; with Bureau of Sewers making plans and profiles. *TT 0.3: P 0.3: D 0.3. TT 9.1: SP 4.5: P 4.6: RC 2.4: D 2.3.* Refers to C. K. Conrad, R. M. Hodges, J. H. Quimby, N. D. Richardson, W. Rowland, R. C. Strachan, W. H. Yates.

837 (2) STEARNS, ALBERT WELLS, Jun., 1 Whittemore Pl., Providence, R. I. (Elected Dec. 4, 1922.) (Age 31. Born Providence, R. I.) 1918 B. S. in C. E., Worcester Pol. Inst. July 1917 to Dec. 1918 Asst. Scheduler and Estimator, Fiske-Carter Constr. Co., Greenville, S. C., on army camp construction. *TT 3.4: SP 3.4.* Jan. to May 1919 Jun. Engr., U. S. Reclamation Service, El Paso, Tex., on drainage for irrigation district in New Mexico. *TT 0.4: SP 0.4.* May to Sept. 1919 Instrumentman, San Joaquin Light & Power Co., Fresno, Cal., on hydro-electric power development, surveys for tunnel locations. *TT 0.3: SP 0.3.* Sept. 1919 to Feb. 1920 Deputy City Engr., Eureka, Cal., on highway and sewer construction. *TT 0.4: SP 0.4.* April 1920 to Jan. 1921 Structural Designer, and Jan. 1921 to April 1922 Asst. Engr. to Chf. Engr., Standard Oil Co. of N. Y., Providence, R. I., on oil refinery engineering and construction. *TT 2: P 2.* May 1922 to date with Jenks & Ballou, Providence, as follows: May 1922 to July 1923 Asst. Inspector on construction of service station for Narragansett Elec. Lighting Co. of Providence; July 1923 to March 1924 Draftsman, miscellaneous design; March to Sept. 1924 Field Inspector and Engr. on construction of additions to mills of H. K. H. Silk Co. in Putnam, Conn., and Haverstraw, N. Y.; since Sept. 1924 Field Engr. on construction of additions to central station of Narragansett Elec. Lighting Co. of Providence. *TT 3.2: SP 1.7: P 1.5: RC 1: D 0.7. TT 9.7: SP 6.2: P 3.5: RC 1: D 0.7.* Refers to H. W. Ballou, R. L. Bowen, H. W. Congdon, A. W. French, W. W. Parks.

838 (5) WENTWORTH, CHARLES RUSCHENBERGER, Jun., P. O. Box 744, Roanoke, Va. (Elected Sept. 12, 1921.) (Age 26. Born Roanoke, Va.) June to Sept. 1916 and July to Aug. 1917 Chainman, and April 1918 to April 1919 Levelman, Norfolk & Western Ry. *TT 1.3: SP 1.3.* April 1919 to April 1925 with Virginia Bridge & Iron Co., Roanoke, Va., as follows: April 1919 to July 1921 Structural Draftsman, detailing bridges, mill buildings, etc.; July 1921 to April 1923 Asst. Contr. Engr., in branch offices at New Orleans, La. (1 year), and at Birmingham, Ala. (9 months), contracting, designing, etc.; while at Birmingham in charge of local contracts; April 1923 to Jan. 1925 structural drafting at Roanoke, detailing, checking bridges, turntables and mill buildings (9 months); then field checking and checking and in charge of sublet drawings; 1 200-ton cement plant for Clinchfield (Ga.) Portland Cement Co. and other large contracts; Jan. to April 1925 Squad Leader in structural drafting, in charge of detailing, checking and supervision of bridge and building contracts. *TT 6.3: P 6.3: RC 2.3: D 1.8. TT 7.6: SP 1.3: P 6.3: RC 2.3: D 1.8.* Refers to A. B. Davis, F. C. James, C. W. Ogden, A. R. Peyton, G. A. Tretter.

The Board of Direction will consider the applications in this list not less than thirty days after the date of its issue.